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Report by  
THE TARIFF BOARD *inference*

Pursuant to the Inquiry Ordered  
by the Minister of Finance  
respecting

GLASS FIBRES AND FILAMENTS

***Reference No. 151***





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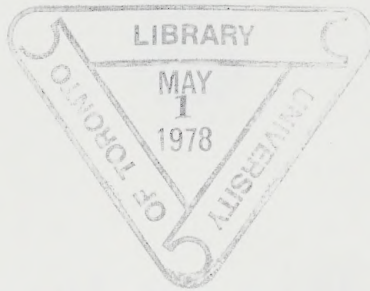


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**GLASS FIBRES AND FILAMENTS**

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THE TARIFF BOARD

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J. Bertrand

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Member  
Member

W.L. Posthumus,  
Director of Research

---

PANEL FOR THIS INQUIRY

L.E. Couillard<sup>(1)</sup>  
W.J. Landreth  
W.T. Dauphinee<sup>(2)</sup>  
René Labelle, Q.C.<sup>(3)</sup>  
G. Deachman  
K.C. Martin

ECONOMIST

Donald Gilfix

---

(1) L.E. Couillard, former Chairman of the Board, retired December 31, 1975.

(2) W.T. Dauphinee, retired August 14, 1975.

(3) René Labelle, Q.C., died August 12, 1976.





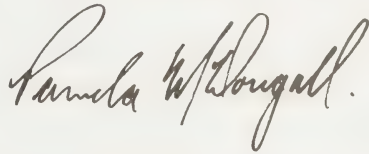
The Honourable Donald Macdonald, M.P., P.C.  
Minister of Finance  
Ottawa

Dear Mr. Macdonald:

I refer to the Honourable John N. Turner's letter of November 16, 1972, addressed to Mr. L.E. Couillard, then Chairman of the Tariff Board, directing the Tariff Board to make a study and report on all conditions and factors which enter into the cost of production or price to users of glass fibres and filaments.

I now have the honour to transmit the Report of the Board, in English and in French, signed by the Panel members on September 1, 1977. A copy of the transcript of the proceedings at the public sittings accompanies this Report.

Yours sincerely

A handwritten signature in dark ink, reading "Pamela W. Dougall." The signature is written in a cursive style with a large, flowing "P" and "D".

Chairman

### Explanation of Symbols Used

- Denotes zero or none reported
- .. Indicates that figures are not available
- \* Indicates a reported figure which disappears on rounding, or is negligible

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The sum of the figures in a table may differ from the total, owing to rounding.

The record of the proceedings of the public sittings held by the Board on this Reference is referred to as the Transcript.



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LETTER OF REFERENCE

Ottawa, Ontario  
K1A OG5  
November 16, 1972

Mr. L.E. Couillard,  
Chairman of The Tariff Board,  
219 Argyle Avenue,  
Ottawa, Ontario  
K1A OG7

Dear Mr. Couillard:

I have received representations to the effect that the provisions of the Customs Tariff relating to glass fibres and filaments have had an inhibiting effect on the development of industries using these materials, particularly the fibre reinforced plastics industry. On the other hand, I have received representations to the effect that the costs of producing these fibres and filaments in Canada are such that the existing tariff protection is necessary in order to ensure that this production remains a viable operation.

In view of the above, I believe that a detailed enquiry into all the conditions and factors which affect or enter into the cost of production of glass fibres, rovings, yarns, strand, and of non-woven batts and mats in Canada and their price to the consumers would be in order. I therefore direct the Board to make an enquiry and to report under Section 4(2) of the Tariff Board Act; the Board's enquiry should include the effects on production and consumption of the following items in Schedule A of the Customs Tariff insofar as they relate to glass fibres, slivers, rovings, yarns, strand and to non-woven batts and non-woven mats, but not including such goods as insulation, woven glass fabrics or items manufactured from glass fabrics:

56005-1	56110-1
56010-1	56117-1
56015-1	56300-1
56105-1	

The Board may include such other tariff items as it may deem relevant to its study.

If the Board's study should indicate that amendments to the Customs Tariff are desirable, I would request that the Board prepare a schedule of tariff items with recommendations as to rates of duty.

Yours sincerely,

John N. Turner





CHAPTER I: INTRODUCTION

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## CHAPTER I: INTRODUCTION

Glass fibres suitable for weaving have been known for over 200 years, but it was not until after the Second World War that textile glass fibre consumption and production began to expand rapidly. This post-war expansion of textile glass fibres and filaments was especially related to their non-textile application as reinforcement media for plastics and other materials. Glass fibres and filaments, like other man-made synthetic fibres, continue to be used in the textile industry. Textile glass fibres are quite different from glass fibres not suitable for weaving; this latter form is used primarily as an insulation material.

### SCOPE OF THE REFERENCE

In his letter of reference, the Minister indicated that he had received representations concerning the possible inhibiting effect of the existing duties on glass fibres and filaments on user industries and, on the other hand, as to the need for such duties for continued viable production of these fibres and filaments. The Minister therefore directed the Board to make a detailed inquiry into all the conditions and factors which affect or enter into the cost of production of glass fibres, rovings, yarns, strand and non-woven mats and batts in Canada and their price to consumers.

For this purpose, the Minister made specific reference to seven tariff items. All the included tariff items are drawn from Group X of the Customs Tariff which covers textile fibres and filaments and articles manufactured from textile fibres and filaments. The Minister's letter specifically excluded from the Reference insulation, woven glass fabrics and items manufactured from glass fabrics. In view of the exclusion of insulation on the one hand, and woven goods and items manufactured from woven goods, on the other hand, the Board has concluded that this Reference is quite clearly restricted to non-woven intermediate goods made from textile glass fibres and filaments.

The Minister also authorized the Board to include in its study such other tariff items as it may deem relevant. The Board found the referred items to be the only ones fully relevant to this study. Tariff items 56205-1 (woven rovings) and 56235-1 (tire fabrics) were discussed during the public sittings as items of peripheral interest, but these items cover woven products which were specifically excluded from the Reference.

The text and the rates of duty currently applicable under the aforementioned seven tariff items are as follows:



<u>Tariff Items</u>	<u>Goods Subject to Duty and Free Goods</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
*56005-1	Man-made fibres or glass fibres, not exceeding twelve inches in length ...	5 p.c.	10 p.c.	15 p.c.
*56010-1	Sliver, wholly or in part of man-made fibres or of glass fibres .....	5 p.c.	10 p.c.	15 p.c.
*56015-1	Man-made filaments or glass filaments imported for converting into lengths not exceeding twelve inches, for use in the manufacture of textile yarns or flock	5 p.c.	10 p.c.	15 p.c.
*56105-1	Yarns and rovings, wholly of man-made fibres or filaments or of glass fibres or filaments, not more advanced than singles, not coloured, with not more than seven turns to the inch .....	20 p.c.	10 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.
*56110-1	Yarns and rovings, wholly or in part of man-made fibres or filaments or of glass fibres or filaments, including threads, cords or twines, not containing wool or hair .....	22½ p.c.	10 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.
56117-1	Yarns, wholly of glass filaments, whether or not plied, for use in the manufacture of woven tire fabrics .....	17½ p.c.	5 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.
(Expires February 28, 1980)				
*56300-1	Clothing, wearing apparel and articles made from woven fabrics, and all textile manufactures, wholly or partially manufactured, the textile component of which is fifty per cent or more, by weight, of man-made fibres or filaments or of glass fibres or filaments, not containing wool hair .....	20 p.c.	25 p.c.	50 p.c.

\*A tariff item bound under GATT (The General Agreement on Tariffs and Trade).

## THE PUBLIC SITTINGS, PROPOSALS AND BRIEFS

Public sittings were held at Ottawa on May 29, 30, and 31, 1973.

Representations were received from the following; those not represented at the sittings are indicated by an asterisk:

- Atlas Asbestos Company
- \*Bostlund Industries Limited
- \*C & C Yachts Manufacturing Ltd.
- \*Chestnut Canoe Co. Limited
- Ferro Enamels (Canada) Limited
- Fiberglas Canada Limited
- \*Ford, J. and Co. Limited
- Graham Products Limited
- \*Grew Limited
- \*ICL Engineering Limited
- \*Northwest Industries Limited
- \*Port Hammond Boat Yard Ltd.
- Protective Plastics Limited
- Reichhold Chemicals Limited
- Rubber Association of Canada, The

In addition to the briefs submitted for the public sittings, the Board has again reviewed the proposals submitted in conjunction with its study of the pleasure craft industry (Reference No. 149) in so far as they related to glass fibres and filaments. As well, there were a number of informal proposals and recommendations resulting from the Board's surveys of the firms using glass fibres and filaments. The major proposals brought before the Board are summarized in Chapter V.

## MAJOR CONSIDERATIONS AND TARIFF ISSUES

In the volume of its report on Reference No. 125 - (Textiles) Silk and Man-Made Fibres, and Products (so-called Synthetics), signed in March, 1959, the Tariff Board noted that it was proposing for the first time that glass should be recognized in the Canadian tariff structure as a man-made product with textile applications. In that report analysis relating directly to glass fibres and filaments was extremely limited; it was noted that fibreglass accounted for only a small share of the market, much of it in specialized applications. The use of glass fibres and filaments as reinforcement materials was not mentioned, probably because this application was still largely undeveloped. Consequently, any tariff recommendations stemming from that Reference with respect to glass fibres and filaments were concerned only with their use in the textile industry. However, most of the expansion that has taken place in the glass fibre and filament industry since that time has not been due to the growth in textile markets, but has come about as a result of increased demand for fibreglass as a reinforcement material.

The present tariff schedule for glass fibres and filaments introduced in 1960 as a result of the Board's report under Reference No. 125 was, thus, designed primarily in the context of their use in the textile industry. However, the rates of duty on textiles are among the highest in the Canadian Customs Tariff. As a result, the rates on glass fibres and filaments, although mostly lower than those on finished textile products, are higher than those applicable to

fibreglass reinforced products. This runs counter to the usual structure of the Canadian Customs Tariff which provides higher nominal levels of protection for the more finished goods. This apparent anomaly was the main reason for the representation before the Board by user industries, primarily the reinforced plastics industry, that the present level of protection provided to glass fibres and filaments had an inhibiting effect.

The major consideration in this study was therefore to determine whether the current tariff structure applicable to glass fibres and filaments, which was set up in a textile context, is too high given the non-textile applications of these products, and whether these duties might be reduced without destroying the viability of the glass fibre and filament industry in Canada.

#### STATISTICAL PROBLEMS AND PROCEDURES

Published data and information on Canadian production, consumption and trade for glass fibres and filaments are practically unavailable. Fiberglas Canada Limited is the sole Canadian producer of these goods. Moreover, glass fibres and filaments are only one aspect of this company's Canadian operations. Further, as Fiberglas Canada Limited was until recently a private company, even published financial data are lacking.

A major portion of the data on which the Board's recommendations are based was provided by Fiberglas Canada from company records. The Board obtained statistics dealing with all aspects of production, administration, and marketing for these goods with respect to costs, prices and returns or profits. Analysis of this data was carried out on both a plant and product level. Although the most detailed data were provided for the years 1971 to 1974, inclusive, the time period covered by this analysis was, wherever possible, extended back to 1967 and some 1975 figures were also obtained. A large part of the data received from Fiberglas Canada was cross-referenced with company data gathered by Statistics Canada in the Census of Manufacturers<sup>(1)</sup> and with information received in a survey undertaken by the Board.

In accordance with the provisions of the Tariff Board Act and the Statistics Act, virtually all the data and information obtained by the Board with respect to the goods in question are confidential and, therefore, cannot be presented in this report. The Board is satisfied that the information provided to it by Fiberglas Canada concerning costs of production of textile glass fibres and filaments in Canada was accurate and provided in good faith. Data as to prices are publicly available and are shown in the report. Further, the Board received permission from the company to publish certain other figures. In formulating its recommendations, the Board took into account both the information published in this report and the data that remain confidential.

Although there are a large number of manufacturers utilizing fibreglass inputs, published industry statistics do not provide sufficient detail to identify properly the importance of fibreglass materials in the overall cost of production for these users. The

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<sup>(1)</sup> The information collected by Statistics Canada is confidential and was released with the permission of Fiberglas Canada Limited.

Board, therefore, conducted three surveys in which questionnaires were sent to all the known users of fibreglass products: textile product manufacturers, reinforced plastics manufacturers, and pleasure craft manufacturers. These manufacturers were asked to supply information relating to both domestic and imported glass fibres and filaments, including usage, prices paid, sources, and the contribution and significance of these materials to the total cost of producing various end-products.

Detailed import information was obtained from an analysis of import documents for the period January to December 1973, and, for certain products, May to December 1975, inclusive. Information regarding exports was supplied by Fiberglas Canada Limited, and is confidential.

### TERMINOLOGY

A study of the glass fibre and filament industry requires the use of a number of specialized terms. This section presents definitions of the terms that will be used throughout this report.

**Textile Glass** - Glass fibres or filaments in a form suitable for spinning or weaving. Although the glass fibres and filaments are manufactured in a form suitable for textile use, this does not preclude their usage in non-textile products. There are other differences between textile and non-textile glass relating to the normally higher quality and greater fineness of the textile glass, but it is the capability of the textile glass of being used in textile products that is the most apparent differentiation.

Throughout this report the term "textile glass" will be used to refer to the type and quality of glass which fulfills the above definition; thus used, it does not make any reference to application, unless specified.

**Fibreglass** - The term "fibreglass" has gained common usage and will be used interchangeably with glass fibres and filaments.

**Fibre** - A unit of matter, characterized by having a length at least 100 times its diameter or width, that possesses considerable strength, pliability and resistance. Although this definition does not put any length restriction on a fibre, it will become evident in the next definition and throughout this report that such a restriction is necessary to avoid confusion. Therefore, throughout this report, a glass fibre is defined as being 15 inches or less in length (see also "staple" and "staple fibre").

**Filament or "Continuous Filament"** - A single unbroken or uncut continuous man-made or glass fibre, the length of which is virtually unlimited. These fibres can be manufactured in a continuous filament, as distinguished from all natural fibres (except raw silk), which normally occur in short lengths. Throughout this report a filament is defined as being greater than 15



inches in length. In actual practice filaments are normally of an extreme length in order to facilitate their usage.

**Staple** - Often used synonymously with fibre. In this report the term "staple" refers to all "fibres" that have been cut from "filaments" (compare to "staple fibre").

**Staple Fibre** - A somewhat redundant term widely used to refer to the staple of man-made or glass filaments that have been cut to definite spinning length. Unlike the terms "fibre" and "staple" which have no minimum but only a maximum length restriction, "staple fibres" must be of a minimum length suitable for spinning. This minimum length may be as low as 1 inch. Although staple fibres may be cut from continuous filaments, in present day practice glass staple fibres used in the manufacture of spun yarns are blown fibres 3 to 15 inches in length that are produced by a specific process.

A single glass fibre or filament is too fine to be used commercially, so that virtually all glass fibres and filaments are further processed into various products before being sold. Consequently, all references in this study to trade in glass fibres and filaments, or fibreglass, will refer to the trade in the basic products, which are defined below.

**Strand** - A collection of fibres or filaments, twisted, plaited, or laid parallel to form an elongated unit resembling a rope. Because single glass fibres and filaments are too fine to be practically handled, they are normally gathered into an untwisted strand at the forming stage; from that point on in the production processes the strand is treated as a single unit. For the purposes of this report "strand" refers only to untwisted units (see also "silver").

**Sliver** - A single continuous rope-like strand of loosely assembled staple fibres without twist that is approximately uniform in cross-sectional area; it is an intermediate step in the production of spun yarn (compare with "staple fibre roving").

One of the most important definitional differences between the textile industry and the glass filament industry occurs with respect to the term "roving." Throughout this study "roving" will be taken to mean the glass filament product, while that product which fulfills the textile industry definition will be referred to as "staple fibre roving."

**Staple Fibre Roving** - A loose assemblage of staple fibres drawn or rubbed into a single strand with very little twist. It is an intermediate state between "sliver" and "spun yarn" (compare with the following definition for filament "roving" which always refers to more than a single strand).

**Roving** - Two or more ends, or its equivalent, of untwisted continuous filament strand. It includes "spun strand roving," a single continuous strand looped back onto itself to give the equivalent of two or more strands, "standard roving," which is a

multiplicity of strands gathered together without a twist, and "P-30 (Process 30) roving," a heavy, single end-roving containing the equivalent of two or more ends of strand.

Spun Yarn - A continuous staple fibre yarn, often of two or more plies, that is composed of carded or combed fibres twisted together by spinning.

Continuous Filament Yarn - One or more filament strands, often of two or more plies, to which some twist has been applied.

Throughout this study, unless otherwise noted, "yarn" will be taken to refer to the filament product, while "spun yarn" will refer to the staple fibre product. Because of the similarities between yarn and other products such as roving, the yarn definitions cover only yarn "packaged for sale as such."

Chopped Strand - Short fibres, the staple length of which runs from  $\frac{1}{4}$  inch to 3-3/4 inches, produced by cutting filament strands; chopped strand can also be cut from roving or yarn.

Milled Fibre - The filament strand (or roving or yarn) hammer-milled to staple lengths of 1/32 to  $\frac{1}{4}$  inch.

Neither "chopped strand" nor "milled fibres" will fulfill the previously given definition of "staple fibre" because length and form will normally prevent their usage in spun yarn.

Mat - A collection of chopped strand,  $\frac{1}{2}$ -inch to 3-inch strands, or continuous filaments gathered together in a random manner and held in position by a suitable binder to provide a given width and thickness.(1)

Although by textile industry definitions a "mat" may be woven or produced in a non-woven form, this study deals exclusively with the glass fibre or filament product defined above. The requirement of randomness is directly related to its usage, see Chapter II.

#### ORGANIZATION OF THE REPORT

Chapter II describes the products under study, the processes of production, and the uses of these products. The market for glass fibres and filaments in Canada, including a discussion of domestic production and trade is presented in Chapter III.

Chapter IV examines the relationship between fibreglass prices and the existing level of duties in order to indicate the level of protection actually utilized. This chapter also investigates the impact of fibreglass prices, and of the present levels of tariff protection, on fibreglass users.

Chapter V examines the tariff items specifically referred to the Board, as well as other tariff issues specifically mentioned in the Minister's letter or deemed relevant to this Reference. Finally, Chapter VI contains the Board's conclusions and recommendations regarding tariff structure and rates.

---

(1) A type of mat is also produced by a needle-punch process, whereby the chopped strands are joined by needle punching with continuous filaments. This process is used primarily for floor coverings. The Board is unaware of any such glass fibre or filament product produced or marketed in North America.



## CHAPTER II: PROCESSES OF PRODUCTION AND THE PRODUCTS

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## CHAPTER II: PROCESSES OF PRODUCTION AND THE PRODUCTS

The strength of glass rises enormously when it is drawn into fibres or filaments a few 10-thousandths of an inch in diameter (hundreds of times thinner than human hair). Laboratory-produced glass fibres and filaments have shown breaking strengths exceeding a million pounds per square inch (psi) and commercial glass commonly attains 400,000 psi when freshly drawn. There is some weakening during fabrication into finished products, but the final strength usually exceeds 250,000 psi. On an equal-weight basis it is the strongest commercially available construction material.

Glass fibres and filaments are inorganic, incombustible, non-hygroscopic, chemically stable, bad conductors of electricity and in some cases of heat, and acid and water resistant. Glass textile fibres and filaments are flexible, although not as flexible as vegetable or animal textile fibres; glass yarns cannot be knotted easily. Yarns and fabrics made from glass staple fibres resemble cotton or worsted; they have a rough texture produced by the free ends of the individual fibres. Continuous filament textiles resemble natural silk or rayon; they have a high lustre and a sleek surface.

### PROCESSES OF PRODUCTION

Fine glass fibres that could be woven were known as early as the beginning of the 18th century when they were produced by melting the end of a glass rod, attaching the droplet to a rotating wheel and thus drawing, or spinning, a fibre. In 1908, W. Pacsinsky produced glass silk fibres by drum-winding threads drawn from the perforated bottom plate of a ceramic glass melting chamber. During the 1930s, three new processes suitable for large scale production were developed in the United States. The first was a process for the production of glass wool, an insulation material, while the other two were textile fibre processes producing glass staple fibres and continuous filaments respectively.

The production of glass fibres and filaments, both textile and non-textile, begins with making glass. The specifications of the glass may differ, although all glass fibres and filaments, like other man-made or synthetic fibres, are initially produced by extruding a liquid, in this instance liquid glass, through a spinnette or bushing. Processing subsequent to extrusion, however, can vary significantly.

These different processes are described below.

#### Glass Wool Process

The glass wool process produces fibres with diameters ranging from about 0.00035 inch to 0.00080 inch, which form a resilient, white fleecelike mass. Production begins with the formulation of the batch of silica sand, limestone and other selected materials as in standard glass manufacturing operations. The batches are melted in large gas-fired or electric melting tanks or furnaces. At the forehearth end of the furnace the molten glass drains down through small

holes in bushings of temperature-resistant metal at which time it is caught by streams of high pressure air or steam. This action attenuates the glass into fibres. These fibres may be long or short, coarse or fine, as determined by the temperature of the glass, the size of the bushing holes and the pressure of the air coming from the jets. The fibres fall through a forming hood onto a travelling conveyor belt on which they are gathered to the desired thickness. The basic wool may be processed and fabricated to form bats, blankets, boards, blocks, and pipe wrapping, for many uses such as insulation or sound absorption.

Glass fibres formed by the glass wool process are limited in use to products specifically excluded from the terms of this study, and will not be further considered.

### Textile Glass Processes

Textile glass fibres and filaments are manufactured by two processes: the staple fibre process and the continuous filament process. Textile fibres and filaments are thinner and of a higher quality glass than are the glass fibres produced by the glass wool process. Unlike glass wool, textile glass fibres are produced in a form suitable for use in the textile industry, although this does not mean that they will actually be put to such use.

As with glass wool, both textile processes begin with the formulation of the batch, a mixture of raw materials used in making the glass from which fibres or filaments are formed. The batch is melted in furnaces and the molten glass flows out in fine streams through the bushings. It is from this point onward that the two textile glass processes differ.

#### Staple Fibre Process

The staple fibre process is substantially the same as the glass wool process in that the staple fibres are formed from the extruded streams of glass by attenuation through the use of jets of steam or air. A staple fibre that can be used for spinning requires, however, more accurate control over length and thickness than a non-textile staple fibre produced by the glass wool process. The staple fibres are gathered as a thin webbing on a revolving drum immediately below the bushings. The webbing is drawn off the drum, gathered as a sliver and immediately wound on a tube. The sliver may then be further processed into spun yarn. If the staple fibres were to be gathered as a webbing on a conveyor belt instead of a drum, they are treated with a binder, calendered and then dried to form a bonded mat.

Textile glass staple fibre is produced in comparatively small quantities in the world today. On the basis of information presented to it, the Board is unaware of any Canadian production of textile glass by this process.(1)

---

(1) The Fort Saskatchewan, Alberta, plant of Canadian Johns-Manville Co., Limited does produce a product similar to staple fibre, although by a slightly different process. That company has informed the Board that it does not manufacture any products in Canada which, if imported, would come under the tariff items listed in the Minister's letter.

## Continuous Filament Process

All known production of textile glass in Canada uses the continuous filament process. In contrast to the two other processes described above, which break the extruded streams of glass into staple fibres, the continuous filament process gathers the streams of glass as unbroken filaments. The various phases by which textile glass filaments are formed and prepared for further processing are illustrated in Diagram 1.

The various batch materials are delivered to the plant and transferred to a storage tower containing separate compartments for each of the powdered ingredients. After the ingredients have been weighed out and mixed, the batch is forced by air through pipes to the furnaces in quantities designed to maintain a constant level of glass.

The furnaces are made from heavy refractory material up to the level of the molten glass, and lighter oven brick elsewhere. So intense is the heat of the molten glass that it actually melts or burns away the refractory material, necessitating the rebuilding of furnaces every third or fourth year.

The molten glass proceeds from the furnace to the fore-hearth which consists of T-shaped tunnels, each of which contains a number of bushings. A bushing is a die, made of platinum, with a number of small holes in it and a forming tube welded over the end of each hole. A bushing may have from 200 to 2000 holes in it. The number of holes depends upon the number of filaments needed for a particular product. Molten glass is drawn through the holes to form filaments, which are cooled, using a water mist, and run over an applicator which puts a thin coating of size or binder on them.

Fibreglass filaments are self-abrasive; consequently, without a coating or binder the filaments would rub against each other and cause continual breakage within the strand, making the product extremely difficult to handle.<sup>(1)</sup> The binder is also a keying agent that allows the filament to form a bond directly to a resin. A great many different binders are used depending upon the end-use of the product. Pipes run from tanks storing these binders directly to the applicators, providing a choice of binders at each applicator.

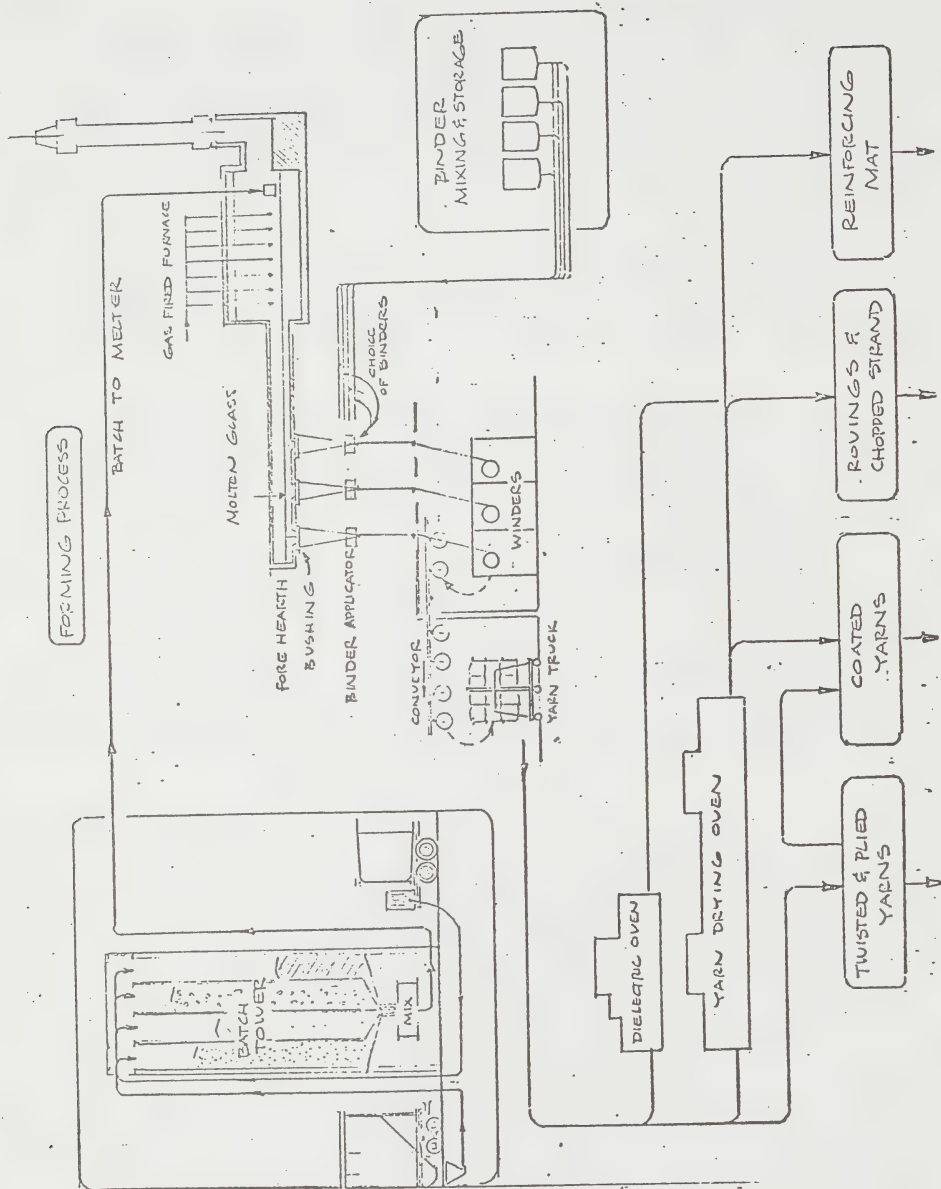
After the application of the size, the filaments are gathered together into a strand at a pulley wheel. The untwisted strand is pulled down to a high-speed winder which winds the strand onto a cylinder, producing a tubeless forming package. This technique is known as mechanical drawing in that the tension created by the winding unit mechanically draws each filament to a diameter considerably smaller than the bushing hole. The process is continuous and the length of the strand on the forming package is dependent only on the packaging requirements.

The strand is the basic working unit of a continuous filament glass plant. Each strand has been formed with a specific number of filaments depending on what further processing is to be performed. From the winding area the forming packages of strand are

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(1) There are also lubricants applied in the other two glass fibre processes, for the same reasons.

DIAGRAM 1



Source: Fiberglas Canada Limited.



placed on a yarn truck and taken either to the drying ovens, in the case of strand used in producing reinforcements and some coated yarns, or directly to the twist and ply area if the strand is to be used in the production of yarn.

## THE PRODUCTS AND THEIR USES

The strand is normally further processed into various basic products in the same plant where the glass filaments are produced. The term basic products is used to refer to those products normally identified with a glass filament plant and are themselves intermediate inputs into other further manufactured goods. The basic product groups are textile products, reinforcement products, and coated yarns.

### Textile Products

The textile products group consists basically of twisted and plied yarns.

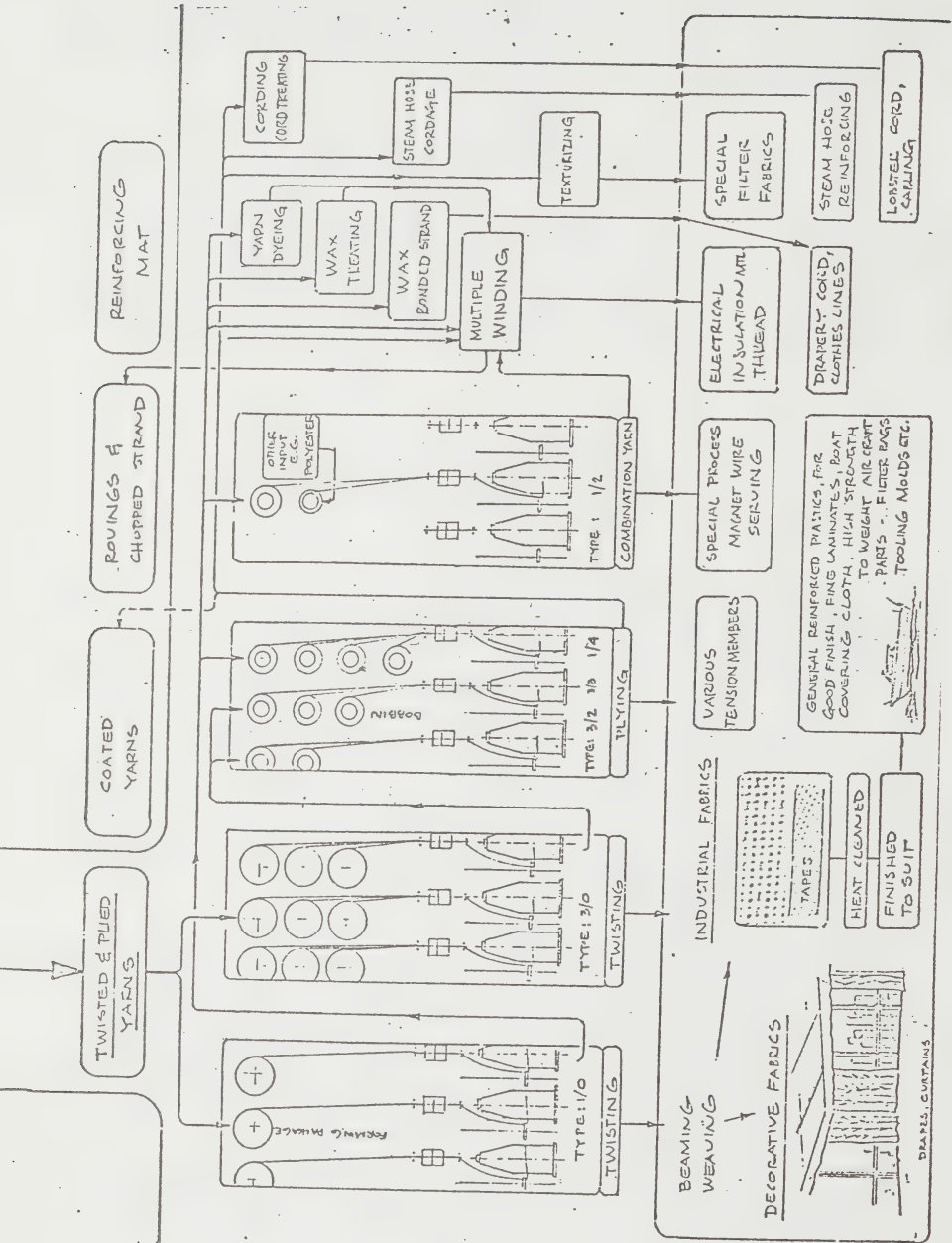
The air-dried forming package of strand (strand for yarn does not go through a drying oven) is taken to the twist and ply area of the plant where the strand is wound from the forming package onto a bobbin (Diagram 2). This winding process determines the number of turns or twists to the inch in the yarn. More than one strand may be used in making a yarn. In this case, several forming packages are placed above the bobbin and the strands are gathered together and twisted as one onto a single bobbin. For "plied" yarn, the twisted yarns from two or more bobbins are twisted together onto another bobbin; this twist is in the opposite direction from that of the feeder yarns so as to prevent the yarn from bunching-up. The twisted yarn can also be plied with other than fibreglass yarn, e.g., polyester yarn, to form a combination yarn.

These yarns may be woven into decorative fabrics for use in draperies or industrial fabrics which can be further utilized in the manufacture of reinforced plastic products. Yarn is also used for reinforcement in the manufacture of tapes, laminates of paper, films, foils, or combinations thereof. When plied with polyester yarn, the yarn is used in the electrical industry for the manufacture of magnet wire. Glass yarn may go through multiple winding and be used in electrical insulation material. The yarn may be corded, waxed, dyed (with resins), or textured for various end-uses. Yarn that has been textured is yarn that, after plying, is bulked or blown up by means of air pressure. The texturing process increases the diameter of the yarn by 30 to 40 per cent, giving it a natural fabric look similar to wool, mohair or linen.

### Coated Yarns

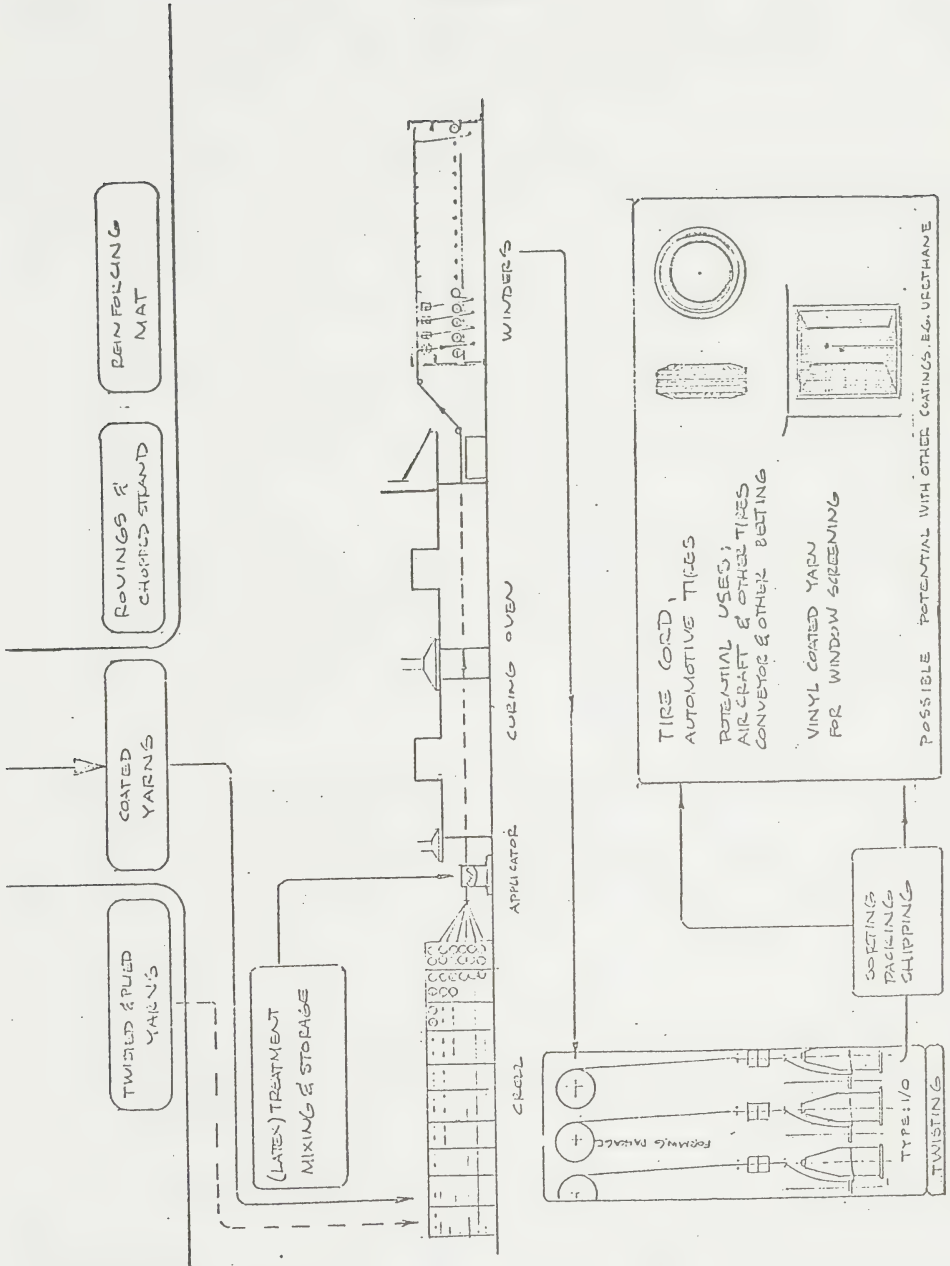
Coated yarns are made from either untwisted strand or from yarn which has already been twisted and plied (Diagram 3). The

DIAGRAM 2



Source: Fiberglas Canada Limited.

DIAGRAM 3



Source: Fiberglass Canada Limited.

strand or yarn is put on a creel and passed through an applicator in which it receives a coating such as latex or urethane. After passing through a curing oven, where the coating is set, the strand or yarn is wound on reels, for further twisting before it is packaged for sale.

Yarns coated with latex are used primarily as a reinforcement in tires and conveyor and other belting. Vinyl coated yarn is used for window screening. Coated yarns are a relatively new fibre-glass product.

### Reinforcement Products

After World War II, glass fibres and filaments began to find wide use in the field of plastics reinforcement, particularly with polyester-type resins which require little or no pressure during their hardening period. Although there are other reinforcing materials used, more than 90 per cent of all reinforced plastics use fibreglass; the balance use sisal, cotton, jute, asbestos, synthetic or metallic fibres. Although epoxy resins are most often selected where high performance is a must, polyester resins, developed in 1942, are used in about 85 per cent of all reinforced plastics. Polyester resins are thermosetting, in that they become hard when heated and further heating will not soften them; the action is irreversible. Glass fibres or filaments may also be used with thermoplastic resins, such as polyethylene, which become soft when heated and hard when cooled; the action is repeatable.

The strength of the finished reinforced plastic article is directly related to the amount of reinforcement material in it, e.g., an article containing 80 per cent fibreglass and 20 per cent resin is four times stronger than an article containing opposite amounts of these two materials. Equally important, the direction of strength is related to the arrangement of the glass fibres or filaments in the fibreglass reinforced plastic (FRP) product. When strands are laid parallel to each other, maximum strength results in one direction (unidirectional). When half the strands are laid at right angles to the other half, strength is highest in two directions (bi-directional), although the strength is less than with the parallel arrangement. When the glass fibres are arranged in a random manner this results in equal strength in all directions (isotropic). There is also a relationship between the way glass is arranged and the amount of glass that can be loaded in a given object, e.g., by placing continuous strands next to each other in a parallel arrangement more glass can be placed in a given volume of plastic.

Rovings, chopped strand and milled fibres, and reinforcing mat are fibreglass products used as reinforcement materials.<sup>(1)</sup> They are produced from filament strand. Reinforcement products, unlike yarns, are oven dried.

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(1) Woven rovings and woven fabrics are also used in reinforcements. These products, however, are usually produced by weavers and not in glass filament plants.

## Roving

There are three main types of roving produced by Fiberglas Canada Limited: P-30 roving; spun roving; and standard roving. For P-30 roving the filaments are gathered together at the forming area into a heavy single-end roving, which contains the equivalent of two or more strands such as are used in the manufacture of yarn or standard roving. Spun roving is a single continuous strand that is spun through two large wheels before going onto the winder. The strand is thus looped back on itself to give the equivalent of two or more strands. These two types of roving are known as direct forming products in that they are ready for packaging and sale once they have come out of the drying ovens.

In the case of standard roving, the forming packages are put onto a creel and the strands are gathered together, untwisted, through a tension control and rewound on a single winder (Diagram 4). The roving is then passed through a heat treating oven and is ready for packaging.

Rovings may be used directly for reinforcement of plastics or they may first go to a weaver and be woven. Rovings may be used for continuous filament winding processes in which special lathes lay down glass filaments in a predetermined pattern to give maximum strength in the directions required, e.g., for chemical tanks, pipe or rocket motor cases. For "pultrusion" the roving impregnated with resin is pushed through a die which sets the shape of the stock and controls the resin content, as in fishing rods, extruded structural shapes, arrow shafts and pipe. For spray-up operations the roving is fed through a chopper and ejected in a resin stream which is directed into a mould, e.g., for boats, prototypes, truck roofs or display signs. In hand lay-up operations, woven roving, or glass fabric or mat, is placed in a mould and the resin is added to it, the material holding to the shape of the mould, as for FRP boats and swimming pools.

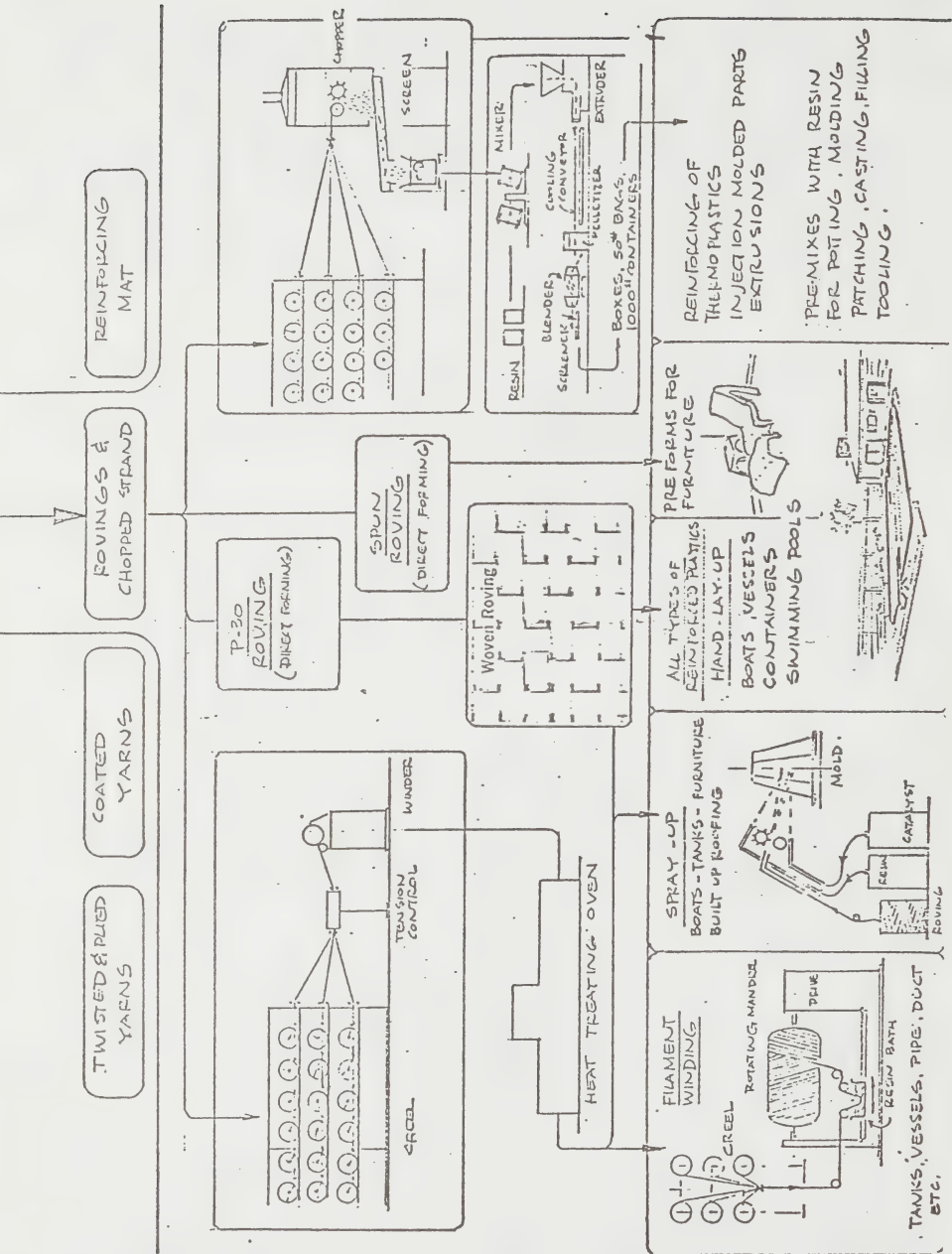
## Chopped Strand

To make chopped strand, the forming packages are put on a creel, gathered together, and fed into a chopper which cuts the strand into lengths from  $\frac{1}{4}$  inch to  $3\frac{3}{4}$  inches (Diagram 4). Milled fibres are produced by hammer milling strand into lengths of  $\frac{1}{32}$  to  $\frac{1}{4}$  inch.

Chopped strand and milled fibres are generally used in the reinforcement of thermoplastics. As such, they may be used in injection moulded parts such as small gears, automotive parts or coil forms. The fibres may also be used in pre-mix moulding compounds in which the chopped strand and resin are pre-mixed for use in the moulding of small complicated parts incorporating many delicate inserts, e.g., electrical switchgear, automotive and appliance components, and trays.



DIAGRAM 4



Source: Fiberglas Canada Limited.



## Reinforcing Mat

Strand is also used to make reinforcing mat. For chopped strand mat the forming packages are taken to a creel room where the strands are gathered together and fed through choppers at the top of a box (Diagram 5). In this case, the strands are chopped into somewhat longer lengths than for chopped strand. The strands falling from the chopper form a randomly deposited mat on a conveyor belt below. The mat moves along the conveyor belt and passes under a binder applicator. The belt then moves through a curing oven where heat activates the binder, causing the strands in the mat to be permanently bound together. As the mat comes from the oven it is trimmed and rolled up.

Continuous filament mat is made from continuous swirl strands laid down in a random pattern and held together by adhesive binders. Surfacing mat is often used (with other reinforcements) for appearance and to resist weathering, but is of low strength and not used alone as a reinforcement. As noted, reinforcing mat may also be composed of glass fibres formed by the staple fibre process.

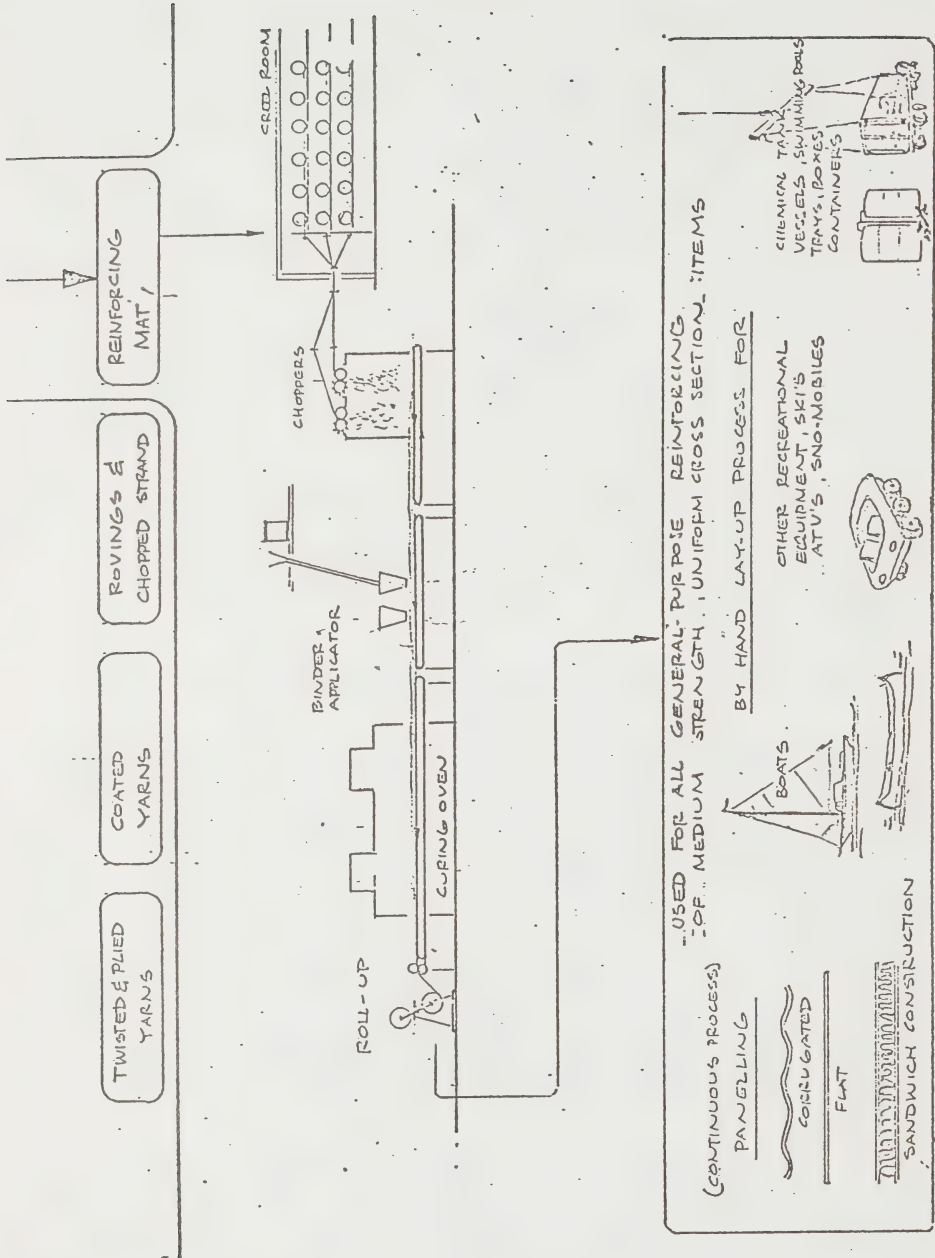
Mat is used in many of the same products as woven roving or woven yarn glass fabrics. The difference lies in the strength requirements of the product. Mat is a general purpose reinforcing product used where medium strength and uniform cross-section are required.

## IMPORTANCE OF FIBREGLASS IN FIBREGLASS REINFORCED PRODUCTS

The percentage weight of glass fibres in a reinforced product varies greatly depending on the strength requirements and method of production of the end-product and the kind of fibreglass material used. Reinforced plastic objects made of filament windings using rovings or yarn normally contain about 75 per cent by weight of glass fibres and up to a maximum of 90 per cent; spray-up operations utilizing continuous roving result in fibreglass reinforced articles which normally contain only about 30 per cent by weight of glass fibres. Continuous roving and yarn may be anywhere from 25 to 90 per cent of the weight of a finished article. Reinforcing mat normally accounts for 25 to 45 per cent and woven-roving fabric for 40 to 60 per cent, by weight. Chopped strand as a percentage of the weight usually ranges from 10 to 45 per cent, although it may total as much as 60 per cent in some moulding compounds, while milled fibre will only range from 5 to 15 per cent.

The aforementioned percentages relate solely to the reinforced plastic part, component or product. Plastics play a wide role in many industries but may represent only a small part of the value of a finished product; for example, fibreglass may represent 50 per cent by weight of the basic hull of a boat, but represent only 5 per cent of the total factory cost of the finished boat. Fibreglass is a manufacturing material which may retain its original characteristics in a product such as drapery, or may lose its original identity entirely, having gone through many stages of further manufacture before reaching its final state, as in a plastic component of an automobile.

DIAGRAM 5



Source: Fiberglass Canada Limited.

CHAPTER III: PRODUCTION, TRADE AND THE MARKET  
FOR GLASS FIBRES AND FILAMENTS

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## CHAPTER III:

PRODUCTION, TRADE AND THE MARKET FOR GLASS FIBRES AND FILAMENTSGROWTH AND DEVELOPMENT OF THE MARKET

Before World War II textile glass fibres and filaments had very limited use in certain special textile products. Since that time, the market for glass fibres and filaments has broadened outside the textile field and production has consequently expanded at a rapid rate. The principal factor in this expansion was the development of a polyester resin that could be applied easily to glass fibres and filaments at room temperatures, thus opening up the vast new field of plastics reinforcement. It was not until the 1960s, however, that fibreglass reinforced plastics gained wide acceptance with industrial users and consumers, and the resulting growth in fibreglass production took place. Production of glass fibres and filaments in non-communist countries alone increased from 231 million pounds in 1960 to 1.2 billion pounds in 1974.

The growth in fibreglass consumption and production has been largely a phenomenon of the high-income, industrially developed countries, led by the United States. In these countries future expansion can be expected to moderate somewhat as existing markets and applications become more fully exploited. Much will depend upon the development of new markets, resulting from technological advances in both the production and use of these materials. For example, developmental work is taking place in the use of reinforced plastics in oil and gas transmission pipelines, such as the proposed Mackenzie Valley pipeline which, theoretically, would tax existing world capacity. World-wide the outlook for the fibreglass industry is very encouraging, because in most countries the use of glass fibres and filaments is still new.

THE PRODUCER

At present there is only one producer of textile glass fibres or filaments in Canada, Fiberglas Canada Limited. The principal owners of Fiberglas Canada are Owens-Corning Fiberglas Corporation, and Duplate Canada Ltd., each with 48 per cent of the outstanding common stock; the remaining 4 per cent being held by Canadian shareholders. Duplate Canada Ltd. is controlled by PPG Industries Inc. According to Fiberglas Canada, since PPG Industries and Owens-Corning are competitors in the production of fibreglass in the United States, it works only with Owens-Corning in the area of technology. Since September 1974 Fiberglas Canada has been a public company; before that date it was a private company.

Fiberglas Canada has five plants in Canada; however, only the plant in Guelph, Ontario, produces textile glass filament. The other plants manufacture glass wool for use as insulation material. The Guelph plant employs about 500 people, some one quarter of the company's total Canadian employment. Continuous filament products represent about 20 per cent of total company sales. In 1973, the total capital investment in the Guelph plant was about \$18 million.

Before 1965 all textile glass filament production by Fibreglass Canada was from glass marbles imported from Owens-Corning in the United States. The company now makes its own glass. Due to pollution control requirements, the Canadian company has had to introduce a new type of textile glass in recent years. The company carried out a five-year research program at a cost of \$1.5 million for this purpose jointly with Owens-Corning Fiberglas Corporation. The new glass, Type E (electrical), eliminates the use of fluorine and boron and contains less than 1 per cent total alkali, much below the 4 per cent sodium usually present in borosilicate/alumina glass.

According to the company, the new process, in service since January 1974, yields a glass fibre the equal of borosilicate. No one else in the world is as yet making a boron-free glass fibre.

### PRODUCTION

Production of glass filaments began in Canada shortly after World War II. In volume terms, growth initially was modest; by 1960, production totalled some 3 million pounds. Output increased more than tenfold during the ensuing 15 years, to over 30 million pounds in 1974. An average annual growth rate of 24 per cent, one of the highest in the world, resulted in a tripling of production from roughly 3 to 9 million pounds during the period 1961-65. Between 1965 and 1970, there was an annual growth rate of 19 per cent, with production reaching over 19 million pounds in 1970.

During the early 1970s Canadian output of glass fibres and filaments grew at an average annual rate of nearly 13 per cent. This was a considerably lower rate of growth than in the 1960s. Although some deceleration was inevitable with increasing market maturity, there were some unique and unusual circumstances during that period which also affected growth adversely. During 1971 and 1972, the company was unable to produce to capacity due to problems encountered in meeting pollution abatement requirements and in developing a new glass. Furthermore, toward the end of 1974 the impact of the "oil crisis" and the ensuing economic recession began to be felt. Most of the growth was thus confined to 1973 and the first half of 1974.

On a per capita basis, production rose from 0.2 pound in 1960 to 0.5 pound in 1965 and to 1.5 pounds in 1974. Per capita production in Canada of textile glass fibres and filaments in 1960 was only about one-quarter that of the United States. However, the very rapid expansion of domestic output during the subsequent years - double the growth rate of the more established U.S. industry - closed this gap in per capita production to one-half the U.S. level in 1974.

Inasmuch as the United States is the world leader in fibreglass usage as well as production technology, it is likely that Canada also lags somewhat behind the United States in terms of per capita consumption. New fibreglass applications emerge on the Canadian scene somewhat later than in the United States and, at any point in time, may not be as fully developed as in that country. However, the gap in per capita consumption is undoubtedly considerably



smaller than in production. Canada imports relatively more than the United States, and exports less, not only of fibreglass materials, but also of the textiles and FRP products incorporating these materials.

The rapid growth in domestic demand for fibreglass materials has led to continued increases in Canadian capacity to produce glass filaments. However, since each additional furnace enhances capacity by considerably more than immediate market requirements, periods of excess capacity occur from time to time. This situation may be aggravated by the sensitivity of demand to changes in general economic conditions. At the same time, surplus capacity can disappear very quickly when an addition to capacity is followed by a sharp upturn in demand, as happened in 1973. The cyclical sensitivity of the Canadian industry is not unique, the same phenomenon being evident in world production (Table 3-2).

Although the Canadian tariff structure with respect to glass fibres and filaments was designed relative to their use in textiles, over two-thirds of domestic output is currently composed of products used in reinforced plastics. Textile applications (including coated yarns) thus account for less than one-third of Canadian fibreglass production.

Considering the reinforcement market only, FRP boats, mostly pleasure craft, constitute the largest market for fibreglass, accounting for over one-third of all sales. Fibreglass used in motor vehicle parts and components has averaged slightly less than one-quarter of total Canadian output, although this market is expected to grow in importance as FRP products, in view of their light weight, will be used increasingly in the motor vehicle industry. Construction, in the form of, for instance, reinforced panelling, averaged just less than 15 per cent of the total reinforcement market. A similar proportion of fibreglass is used in corrosion resistant materials. The remaining 10 per cent of all fibreglass sold for reinforcing is for manufacturing a number of miscellaneous items such as furniture, parts for household appliances and various leisure goods.

#### FOREIGN TRADE

During the public sittings, Fiberglass Canada stated that it does not actively seek export markets except when it has excess capacity. This was confirmed by confidential information made available to the Board.

#### IMPORTS

Fibreglass products may be imported directly, or indirectly as textiles or fibreglass reinforced products. Indirect as well as direct imports compete with and displace Canadian production of fibreglass products. The Board recognizes that indirect imports of fibreglass in the form of further processed goods are probably much more significant than direct imports. However, the Board was unable to estimate the level of these indirect imports, and hence the following discussion deals solely with imports of fibreglass materials.

Published data pertaining to imports of glass fibres and filaments are available only with respect to glass yarns and rovings combined, recorded under import commodity class 366-30. Imports of these and other fibreglass materials were not readily available by tariff item because glass fibres and filaments enter under the same tariff item as other synthetic fibres, with the exception of glass tire cord which has since June 1970 been provided for in a separate tariff item, 56117-1. In order to fill this gap to some extent, the Board carried out a search of raw import documentation for 1973 to ascertain the level of imports in that year for fibreglass other than yarns, rovings and tire cord.

Analysis of confidential information indicates that imports, excluding indirect imports, accounted for about 13 per cent of the Canadian market for textile glass fibres and filaments, and that the Canadian producer supplied about 87 per cent. With respect to yarns, rovings and tire cord it appears that imports, for which data are available for a number of years, have grown in line with Canadian production, and that the level of import penetration has remained at about 10 per cent of the domestic market.

Import penetration tends to be greatest at times of deficient capacity on the part of the domestic producer. This occurred in 1971 and again in 1973. In addition, some product lines, for which the Canadian market has not yet grown to a level warranting production in Canada, are currently being imported by Fiberglas Canada for resale.

On an individual commodity basis, of less than one-half million pounds of glass fibres imported under tariff item 56005-1 in 1973, virtually the entire amount was identified as chopped strand and milled fibre. Imports of glass fibres, under tariff item 56010-1, amounted to only a few thousand pounds. Furthermore, there were, in that year, no recorded imports at all of glass filaments for use in the manufacture of yarns or flock under tariff item 56015-1.

It is not surprising that imports under these three tariff items were restricted to reinforcement products. As noted earlier, the Board is unaware of any manufacturer in Canada who uses glass staple fibres or who would import glass filaments for conversion into staple fibres. The Board found that even the imports of chopped strand and milled fibres did not appear to constitute any continuing influx of competitive goods. Milled fibres, which made up a large portion of the imports, are not produced in Canada. Almost all of the chopped strand imports were identified as being either intermittent intra-company transfers or products of a particular type not produced in Canada. All imports under these tariff items were from the United States.

Imports of non-woven glass fibre or filament mat, tariff item 56300-1, amounted to approximately one million pounds in volume and one-half million dollars in value in 1973. Information received by the Board indicates that imports during 1973 were not representative of the current situation and were somewhat higher than in more recent years. There are a number of companies currently selling imported reinforcing mat in Canada.

Imports of glass tire cord, under tariff item 56117-1,<sup>(1)</sup> amounted to about one-half million pounds in 1971, increased to just under one million pounds in 1972 and returned to approximately the 1971 level in the years 1973 and 1974. The market for fibreglass tire cord has been almost uniquely North American. Only Owens-Corning and PPG Industries appear to have developed tire cord technology; Fiberglas Canada takes its technology from Owens-Corning. There has been product differentiation on the part of these two U.S. companies with respect to glass tire cord. It seems that Canadian imports are limited to the type not produced by Fiberglas Canada but preferred by some certain tire manufacturers.

Imports under commodity class 366-30, comprised of glass yarns and rovings, entering mainly under tariff items 56105-1 and 56110-1, averaged 2.2 million pounds annually during the period 1970-75. Imports under tariff item 56105-1 totalled just over three-quarters of a million pounds in 1973, although they were nearly twice as high in 1971 when there was a tight domestic supply situation. Imports entering under this tariff item are singles, i.e., yarns and rovings composed of a single group of filaments or strand. Yarns and rovings comprised of more than one group of strands enter under tariff item 56110-1. Imports of the latter totalled over one and a half million pounds in 1973. The United States is the main source of imports of glass yarn and roving. Italy, West Germany, United Kingdom, and France, on occasion, also ship these fibreglass products to Canada.

Analysis by the Board pertaining to tariff items 56105-1 and 56110-1 during 1975 indicated that at that time the major portion was rovings and the remainder yarns. The rovings entered almost exclusively under 56110-1. This pattern may well be different in other years.

Information presented to the Board indicates that most of the yarn imports are for use in the production of further manufactured products for export. This same situation holds true for a large portion of the roving imports. In cases where glass fibres or filaments are imported for further processing and subsequent re-export, the importer is able to obtain a drawback of duty. Under these circumstances, the rates of duty, regardless of their level, have no protective effect.

#### WORLD PRODUCTION

Technology relating to the commercial production of textile glass fibres and filaments is still relatively new and is controlled by a small number of companies. As a result, most companies producing fibreglass in the non-communist world are affiliates or subsidiaries of a few major producers.

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(1) Before June 1970, when tariff item 56117-1 was established, tire cord entered under tariff item 56110-1, and was classified under import commodity class 366-30 with glass yarns and rovings. Beginning in 1971, import commodity class 367-95 covered glass tire cord.

In 1975, there were estimated to be 79 textile glass fibre and filament producing plants in the world, located in 25 countries (Table 3-1). Owens-Corning is the world's largest producer. Other multinational producers include PPG Industries Inc., United Merchants and Manufacturers (United States), Saint-Gobain (France) and Pilkington Brothers (United Kingdom). Of the 56 plants located in 20 non-communist countries, Owens-Corning had a direct or indirect interest in at least 18 plants in 13 countries, PPG Industries in six plants in four countries, United Merchants and Manufacturers in three plants in three countries, and Saint-Gobain in seven plants in five countries. Of the 22 plants which were apparently owned by independent producers, nine were in Japan, eight in Western Europe, and five in the United States.(1)

Rapid expansion in the output of glass fibres and filaments has not been unique to Canada but is a world-wide phenomenon. Table 3-2 shows production for a number of specified countries.(2) In 1960, when fibreglass usage was still very much in the development stage, the United States produced much more than half of the world output of glass fibres and filaments. Since that time, as usage "matured" in the United States, and as production expanded rapidly in such countries as Japan, the relative position of the United States has declined substantially. In 1974, Canada produced less than 3 per cent of world output.

Using average output per plant as an indicator of scale of production, the United States ranked first among producers in 1973 at 53 million pounds. By comparison, Fiberglas Canada produced 32 million pounds. Each plant in the Netherlands, Belgium, and West Germany combined produced on average 31 million pounds, in France 27 million pounds and in Japan 20 million pounds. While these averages suggest that there are undoubtedly larger plants in the world than the fibreglass plant in Guelph, there are also many which are considerably smaller.

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- (1) Partial ownership of these apparently independent plants by the major fibreglass producers is quite possible, as the major producers may hold partial ownership through subsidiary companies.
- (2) Data were not available for all producing countries. Nevertheless, it is believed that the total volume in Table 3-2 is a reasonable indicator of the trend in world production of fibreglass.



Table 3-1: Estimated Number of Textile Glass Fibre Producing Plants, 1975

<u>Country and Region</u>	<u>No. of Plants</u>
<u>West Europe</u>	
Belgium and Luxembourg	2
Finland	1
France	3
Germany, Federal Republic of	2
Italy and Malta	3
Netherlands	2
Norway	1
Spain	1
Sweden	1
United Kingdom	6
Total West Europe	22
<u>East Europe</u>	
Czechoslovakia	2
German Democratic Republic	1
Poland	2
U.S.S.R. (1972)	11
Total East Europe	16
<u>Americas</u>	
Argentina	1
Brazil	1
Canada	1
Columbia	1
Mexico	1
United States	13
Total Americas	18
<u>Africa, Asia, &amp; Oceania</u>	
Australia and New Zealand	1
China, People's Republic (1973)	7
India	1
Japan	13
South Africa	1
Total Africa, Asia, & Oceania	23
World Total	79

Source: Textile Organon.

Table 3-2: Textile Glass Fibre Production by Country, (a) 1960-1974

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
								- million lb. -							
France	19.8	17.8	21.6	24.3	29.0	32.5	34.0	35.4	38.1	46.7	51.8	46.0	51.5	79.4	75.0
Italy	6.6	8.9	11.3	13.9	13.1	15.2	15.3	18.6	20.0	24.0	31.5	33.5	34.0	41.9	41.9
Sub-total	26.4	26.7	32.9	38.2	42.1	47.7	49.3	54.0	58.1	70.7	83.3	79.5	85.5	121.3	116.9
Other EEC (b)	9.8	12.0	13.0	15.0	20.0	30.0	50.0	57.2	85.0	113.5	131.0	137.0	174.0	187.4	209.4
Sub-total all EEC	36.2	38.7	45.9	53.2	62.1	77.7	99.3	111.2	143.1	184.2	214.3	216.5	259.5	308.7	326.3
Sweden	1.6	1.8	1.8	2.3	3.6	4.4	4.8	4.8	9.6	12.0	..	..	..	..	..
Total - Europe	37.8	40.5	47.7	55.5	65.7	82.1	104.1	116.0	152.7	196.2	214.3	216.5	259.5	308.7	326.3
Argentina	0.2	0.3	0.3	0.2	0.5	0.9	1.0	1.8	1.4	2.1	2.2	2.2	4.4	..	..
Canada	3.2	3.9	5.7	5.7	6.1	8.9	9.7	10.5	13.6	15.8	22.0	22.0	26.5	32.1	34.2
Sub-total (c)	3.4	4.2	6.0	5.9	6.6	9.8	10.7	12.3	15.0	17.9	24.2	24.2	30.9	..	..
Mexico	0.7	0.8	0.8	1.1	1.3	1.2	1.5	1.8	1.8	2.1	4.4	4.4	4.4	..	..
Sub-total (d)	4.1	5.0	6.8	7.0	7.9	11.0	12.2	14.1	16.8	20.0	28.6	28.6	35.3	44.1	41.9
United States	177.0	149.3	190.3	191.9	239.5	282.3	332.4	308.8	402.7	501.4	467.3	468.2	571.6	687.8	683.4
Total - Americas	181.1	154.3	197.1	198.9	247.4	293.3	344.6	322.9	419.5	521.4	495.9	496.8	606.9	731.9	725.3
Australia	0.4	1.0	1.3	1.5	2.2	2.9	3.4	4.0	4.9	5.2	7.8	8.4	8.5	11.0	..
India	-	-	-	-	-	-	-	-	-	0.1	0.2	0.8	0.9	2.2	..
Japan	11.7	10.8	10.7	17.0	22.1	24.0	26.8	41.1	57.8	73.8	115.8	155.7	190.6	251.3	..
Sub-total	12.1	11.8	12.0	18.5	24.3	26.9	30.2	45.1	62.7	79.1	123.8	164.9	200.0	264.5	277.8
Czechoslovakia	..	..	..	..	6.2	6.9	7.8	8.8	10.2	10.5	22.0	33.1	..	..	..
Poland	-	-	-	-	-	-	-	-	-	0.1	0.6	0.9	1.6	2.2	..
East Germany	..	..	..	..	..	21.3	15.6	16.1	16.8	17.0	..	..	..	..	..
Total - 6 Countries	12.1	11.8	12.0	18.5	30.5	55.1	53.6	70.0	89.7	106.7	146.4	198.9	201.6	266.7	280.0
Total	231.0	206.6	256.8	272.9	343.6	430.5	502.3	508.9	661.9	824.3	856.6	912.2	1,068.0	1,307.3	1,331.6

(a) Data are not available for Brazil, Colombia, China (Mainland), Finland, Ireland, Norway, South Africa, Spain, Switzerland, the United Kingdom, and the U.S.S.R.

(b) Belgium, Netherlands, and West Germany.

(c) Argentina and Canada.

(d) Argentina, Canada and Mexico.

Source: Textile Organon.



CHAPTER IV: GLASS FIBRE AND FILAMENT COSTS AND PRICES

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## CHAPTER IV: GLASS FIBRE AND FILAMENT COSTS AND PRICES

This chapter first presents the Board's findings with respect to the cost and profitability of glass fibre and filament production in Canada as compared with the United States. Next, there is an analysis of fibreglass prices and pricing policies in the two countries. This is followed by a discussion of the way in which higher prices in Canada affect Canadian users of glass fibres and filaments. Confidentiality again allows for the presentation of only limited portions of the data used by the Board.

### PRODUCTION COSTS

Fiberglas Canada Limited supplied the Board with detailed information on the costs of producing textile glass fibres and filaments in Canada, at both the plant and the individual commodity level. The Board, on the basis of data and information from various sources, was able to arrive at comparable figures on production costs in the United States, though only at the industry level. A comparison of the two industries indicates that production costs in Canada are higher than in the United States. However, this differential in production cost was considerably less than the level of protection provided by the present tariff.

It was found that the cost disadvantage of Fiberglas Canada was more the result of the wide range of glass filament products than of the plant's basic capacity to produce textile glass and glass filaments. Thus, while the smaller capacity of the Canadian plant, in terms of glass, did result in somewhat higher costs, as did raw materials, it was mainly in the production stages beyond the forming of the initial filament that the greatest cost differentials were incurred. This affected overhead costs as machinery, due to the shorter production runs required for the Canadian market, is used less efficiently. Short production runs and frequent change-overs also had an adverse effect on overall productivity of labour at the Canadian plant; it was noticeable for a number of the high volume products that labour productivity in Canada compared very favourably with that in the United States. Moreover, in terms of unit labour cost, the productivity gap has, in recent years, been aggravated for the Canadian producer by rising wage rate differentials.

### PROFITS

It was found that the return on gross sales to Fiberglas Canada for its glass fibre and filament production was similar to the overall return to fibreglass producers in the United States and other related Canadian manufacturing industries. It was equally clear that the company's profits were not excessive, despite the company's position as sole Canadian producer of these commodities.

## PRICES AND PRICING POLICIES

The absence of excessive profits to Fiberglas Canada from its textile glass operations, when coupled with production cost differentials, which are considerably less than the existing level of tariff protection, suggests that the Canadian producer does not price up fully to the tariff. This section examines whether and to what extent pricing up takes place.

The Board obtained information relating to prices at a number of levels. Information dealing with domestic prices of fibreglass products to industrial users, volume discounts, and export rebates was available from published price lists. Data relating to distributors' discounts and to prices charged for direct export sales were supplied to the Board on a confidential basis, as were data relating to the actual sales return, net of any discounts, rebates, freight costs, and other allowances, realized by Fiberglas Canada. The Board also obtained the published U.S. price lists of Owens-Corning Fiberglas Incorporated and confidential statements dealing with its distributor discount policies.

While there are a number of other producers of textile glass fibres and filaments in the United States, whose prices were not included in the comparison of prices in the two countries, Owens-Corning Fiberglas is the world's largest producer and is a price leader. The comparison of the list prices of Fiberglas Canada with those of Owens-Corning Fiberglas was deemed to be representative of the general situation.

Although the Board based its analysis and conclusions on all the aforementioned data and information, only published list prices are shown in the following analysis and discussion. However, these list prices represent the basis for the prices at which most consumers actually purchase fibreglass, and are felt to be an accurate reflection of price differentials, if not actual prices charged, with respect to the vast majority of users, and most of the fibreglass used.

### Pricing Policies

Fiberglas Canada markets fibreglass products from its Guelph plant by selling direct to large industrial users and through a system of distributors to handle the needs of smaller firms. The company has stated that it attempts to provide uniform pricing across Canada. For direct orders of a full truckload or carload of 30,000 pounds or more, Fiberglas Canada pays the transportation charges to the customers' warehouse or, in the case of rail transport, to the closest rail destination. Any number of listed products may be combined in one order from Fiberglas Canada to attain truckload quantities. On orders of less than 30,000 pounds, prices are f.o.b. Fiberglas Canada Limited, Guelph, Ontario. This policy, of absorbing transportation charges on the large volume orders, also applies to sales to distributors.

Fiberglas Canada stated, at the public sittings that, while it does not attempt to dictate or control their resale policies, distributors in major Canadian centres would normally sell according to the published list prices. For small orders outside of the major centres it is likely that the distributor would attempt to reclaim some of the additional transportation costs. This same type of deviation from list prices would also be expected to occur in the United States. Information obtained from the Board's surveys confirms the existence of the general application of list prices across Canada.

The U.S. distribution system, as exemplified by Owens-Corning Fiberglas, differs from that in Canada to the extent that absorption of transportation charges by the producer is not tied to volume purchase. With the exception of shipments to the Pacific Coast, all prices are quoted f.o.b. shipping point, but freight is allowed on seller's routing; additional transportation charges are extra. Shipments to the Pacific Coast do require some minimum volumes in order to have the freight charges absorbed. In the United States, the greater segment of business is on a direct basis, due in part to the size of user operations and in part to the policy of absorbing freight costs regardless of volume.

Certain of Fiberglas Canada's product lines, such as yarns and tire cord, appear for the most part to have their usage largely limited to the central Ontario and Quebec region. For yarns and tire cord all sales are direct to weavers or other customers. On the other hand, many of the other industries utilizing fibreglass inputs are widely dispersed throughout the country. For most of these products the main portion of sales are made through distributors.

Fiberglas Canada sells to distributors at a certain percentage less than the full truckload list prices. However, the distributor discounts given by the U.S. producers are believed to be roughly equivalent to those in Canada, and are also based on the same system of a percentage discount from list price. Such being the case, the percentage difference in producers' prices to distributors would be the same as the percentage difference on list prices. Throughout this chapter the differentials in full truckload list prices can be taken as being the same as the differentials in producers' prices to distributors in Canada and the United States.

Users, purchasing reinforcement products direct from Fiberglas Canada in truckload quantities, are eligible for a rebate upon achieving a certain volume of purchases (Table 4-1). The percentage and unit rebates are calculated on the basis of full truckload (FTL) list prices. Distributors do not receive discounts with respect to volume purchased, but rather a discount to provide a margin for distribution costs.

Purchasers of products destined for use in goods which are to be exported may obtain an export credit. This type of credit is available both to users who purchase directly from Fiberglas Canada as well as to users who buy through a distributor, although volume requirements are significantly lower for those buying through a distributor. The amount of the export rebate is usually of such an order that the industrial user in Canada pays the same price as his competitor in the United States. Without such an export rebate, the Canadian user would simply import the required fibreglass material and, upon exportation of the finished product, claim a drawback of the duties paid.

Available data for U.S. prices do not indicate either large volume discounts or export credits. The Board is not aware of any specific policies of large volume discounts or export credits by U.S. producers although in slack periods it is believed that there may be specially negotiated prices for both large volumes and exports.

Table 4-1: Selected Glass Filament Products: Volume Discounts for Direct Purchasers and Export Credits, 1972, 1974, and 1975

	Volume Discount (at Applicable Poundage)				Export(a) Credit
	<u>150,000</u>	<u>250,000</u>	<u>500,000</u>	<u>750,000</u>	
	- per cent -				- \$ per lb. -
<u>1972</u>					
Continuous roving	5	7	7	7	.125
Continuous spun roving	5	7	7	7	.125
Chopped strand mat (M700, M750, and M900)	5	7	7	7	.07 (1 oz./ft. <sup>2</sup> ) .09 (1½-3 oz./ft. <sup>2</sup> )
Chopped strand (dollars per pound) -	-	.01	.02	.03	.045
<u>1974 (Oct.)</u>					
Continuous roving	5	7	7	7	.10
Chopped strand mat (M751 and M777)	5	7	7	7	.065 (1 oz./ft. <sup>2</sup> ) .095 (1½-3 oz./ft. <sup>2</sup> )
Chopped strand (dollars per pound) -	-	.01	.02	.03	.04
<u>1974 (Feb.)</u>					
Continuous roving	5	7	7	7	.11
Chopped strand mat (M751 and M777)	5	7	7	7	.065 (1 oz./ft. <sup>2</sup> ) .095 (1½-3 oz./ft. <sup>2</sup> )
Chopped strand (dollars per pound) -	-	.01	.02	.03	.04
<u>1975 (Oct.)</u>					
Continuous roving	-	3	5	5	.12
Chopped strand mat (M751 and M797)	-	3	5	5	.12
Chopped strand (dollars per pound) -	-	-	.01	.02	.05

(a) Exports must incorporate a minimum of 10,000 lb. of continuous roving or chopped strand mat.

Source: Fiberglas Canada Limited.



## Prices

In this section Canadian and U.S. prices will be compared for the purpose of ascertaining the extent to which Fiberglas Canada utilizes the existing levels of tariff protection on textile glass fibres and filaments. With full tariff utilizations one would expect that Canadian fibreglass prices would be higher than the U.S. prices by the full amount or level (per cent) of the tariff. A United States - Canada price difference of less than this would indicate less than full tariff utilization. Less than full tariff utilization would confirm the Board's findings with respect to the cost disadvantage and profitability of the Canadian producer.

The price comparisons will be made essentially on the basis of list prices. The differentials between U.S. and Canadian fibreglass prices arrived at in this manner are believed to be representative of the differences in the average prices actually paid by consumers in the two countries. In reality, differences in the average returns on sales to the producers will tend to be smaller than those indicated by list prices because of volume and export rebates offered by the Canadian producer and the greater prevalence of distributor sales and discounts in Canada.

Yarn - Yarn prices in the United States and Canada for 1974 and 1975 are shown in Table 4-2. As is evident, Fiberglas Canada appears to use only a small portion of the available tariff protection for yarns. Fiberglas Canada stated to the Board that the textile industry had been going through a major recession and that Canadian textile manufacturers would be unable to continue production with higher prices for glass yarns. The Board recognizes that in a number of cases yarns are being sold at a below-cost price, so that the list prices are not a reflection of the actual production costs. However, continuing production of these yarns enhances capacity utilization and absorption of plant overhead.

Table 4-2: Comparative Glass Yarn Prices, Canada and United States, 1974 and 1975

<u>Product</u>	<u>Year</u>	<u>Canada</u> - Can. \$ per lb. -	<u>United States</u>	<u>Canada/U.S.</u> <u>Differential</u> %	M.F.N. Tariff Ad Valorem Equivalent (T.I. 56105-1 and 56110-1) %	Percentage of Tariff Utilized %
DE 75	1974	.61(.03)	.58	5.2	27.2	19.1
	1975	.61(.03)	.58	5.2	27.2	19.1
DE 150	1974	.66(.02)	.63	4.8	25.9	18.5
	1975	.66(.02)	.66	0.0	25.2	0.0
G 75	1974	.58(.08)	.50	16.0	30.0	53.3
	1975	.58(.08)	.50	16.0	30.0	53.3
G 150	1974	.62(.03)	.59	5.1	26.9	19.0
	1975	.62(.03)	.63	-1.6	25.9	-6.2

The figures shown in brackets are the export rebates given to Canadian weavers by Fiberglas Canada Limited on proof of export of woven goods. There are no volume discounts.

Source: Fiberglas Canada Limited; Owens-Corning Fiberglas Incorporated, United States.

Tire Cord - Fibreglass tire cord is sold on a direct basis either to the tire manufacturer or to the weaver who, in turn, supplies tire fabric to the tire manufacturer. A credit or rebate approximately equal to the difference between Canadian and U.S. list prices is granted to the manufacturer on all tire cord which is used in tires going into the OEM (Original Equipment Manufacturers) market, either domestic or export, and on all tire cord used in tires for export. Tire cord used in the manufacture of tires for the domestic replacement tire market is sold at regular list prices. Table 4-3 shows the relationship between Canadian prices for the replacement tire market and U.S. prices.

Table 4-3: Comparative Tire Cord Prices, Canada (Replacement Tires Only) and the United States, 1973 to 1975

	Canada	United States	Differential	M.F.N. Tariff Ad Valorem Equivalent
	- Can. \$ per lb. -		%	%
1973	.905	.780	16.0	17.8
1974	.905	.762	18.8	18.1
1975	.895	.830	7.8	17.0

Source: Fiberglas Canada Limited. U.S. prices are for Owens-Corning Fiberglas Incorporated.

The list price for tire cord used in the domestic replacement tire market averaged about 17 per cent higher than the corresponding U.S. list price for 1973 and 1974. There was, therefore, nearly a full utilization of the tariff on tire cord sales for domestic replacement tires. However, the differential declined to about half the available protection in 1975, when Fiberglas Canada reduced its price for tire cord while the U.S. price increased.

Chopped Strand - Chopped strand, due to its specialized uses, is sold in Canada mostly to high volume users, who would probably receive a volume discount from list price. The most appropriate comparison between Canadian and U.S. prices would be on the basis of discounted FTL and FTL prices respectively (see Table 4-4). On this basis it would appear that Fiberglas Canada does not price up fully to the tariff. As the Canadian-U.S. price differential on chopped strand declined considerably in 1975, it appears that, in fact, very large volume users in Canada did even better. However, it is likely, in the face of the poor market conditions also in the United States, that producers in that country also provided a volume discount and that actually the price difference in that year for chopped strand between the two countries was not unlike that in previous years.

Table 4-4: Comparison of List Prices for Chopped Strand,  
Canada and United States, 1972, 1974, and 1975

	<u>1972</u>	<u>1974</u> (Feb.)	<u>1974</u> (Oct.)	<u>1975</u> (Oct.)
- Can. \$ per lb. -				
<u>Prices</u>				
Canada:				
FTL, with volume discount(a)	.365 to .385	.38 to .40	.42 to .44	.45 to .46
United States:				
FTL	.35	.37	.40	.46
- per cent -				
Differential				
Canada/United States	4.3 to 10.0	2.7 to 8.1	5.0 to 10.0	-2.1 to 0.0
M.F.N. Tariff	10.0	10.0	10.0	10.0

(a) See Table 4-1 for applicable volume.

Source: Fiberglas Canada Limited and Owens-Corning Fiberglas Incorporated.

Rovings - With respect to glass rovings and mat, which Fiberglas Canada sells mainly through distributors, prices in Canada and the United States are compared at the FTL level. As shown in Table 4-5, prices of P-30 roving, the lower value product, during the period 1972 to 1974, were more than a third higher in Canada, while for standard roving this difference ranged from nearly a third to a quarter. Price differences between the two countries for the two products, at FTL levels, narrowed substantially as of October 1975. Although there may be no substantial increases in direct import competition, the rovings must be priced so as to allow users of these intermediate goods to maintain their competitive position.

Prices are shown in Canadian dollars so that part of the change shown is due to exchange rate fluctuations; for example, if the exchange were calculated at par, the list price differentials shown in Table 4-5 would have been about 2.5 percentage points lower in 1974 and about 2.5 percentage points higher in 1975.

Table 4-5 also shows that the level of protection for rovings has declined. Because the present tariff combines an ad valorem (per cent) and a specific (cents per pound) duty, the ad valorem equivalent of the specific duty component declines as prices of rovings rise. Moreover, this equivalent is higher for the lower-priced product, P-30 roving, than for standard roving.

As of October 1975, at FTL prices, it appears that the Canadian producer used only about half of the available tariff protection for standard roving and close to two-thirds for P-30 roving. During the period 1972 to 1974 the level of tariff utilization exceeded 70 and 90 per cent respectively.

Table 4-5: Comparison of (FTL) List Prices for Class Filament Rovings, <sup>(a)</sup> Canada and United States, 1972, 1974, and 1975

	<u>1972</u>	<u>1974</u> (Feb.)	<u>1974</u> (Oct.)	<u>1975</u> (Oct.)
- Can. \$ per lb. -				
<u>FTL Prices</u>				
<u>Canada</u>				
Standard roving	.47	.49	.53	.56
P-30 roving	.44	.45	.49	.51
<u>United States</u>				
Standard roving	.36	.39	.42	.48
P-30 roving	.32	.33	.36	.42
Differential - per cent -				
<u>Canada/United States</u>				
Standard roving	31.6	25.3	25.3	16.2
P-30 roving	38.8	36.6	36.1	21.4
<u>M.F.N. Tariff (Ad Valorem Equivalent Rate of Duty)</u>				
Standard roving	37.8	35.6	33.8	30.8
P-30 roving	41.5	40.3	37.8	33.8

(a) Prices shown are for comparable products.

Source: Fiberglas Canada Limited and Owens-Corning Fiberglas Incorporated.

Mat - Imports of textile glass fibre or filament reinforcing mat are subject to a rate of duty of 25 p.c. M.F.N. (Table 4-6). However, list price differentials in 1975 for full truckload purchases of comparable products ranged between 11 and 17 per cent (one product, not shown in the table, had a 17.1 per cent list price differential in (Oct.) 1975). Thus, the Canadian producer generally used, as of (Oct.) 1975, less than half the tariff protection available to him. Previously, the level of tariff utilization was higher, but, as can be seen, there was at no time full utilization.

Table 4-6: Comparison of (FTL) List Prices for Glass Fibre Chopped Strand Mat, (a) Canada and United States, 1972, 1974, and 1975

	<u>1972</u>	<u>1974</u> (Feb.)	<u>1974</u> (Oct.)	<u>1975</u> (Oct.)
<u>FTL Prices</u>	- Can. \$ per lb. -			
<u>Canada</u>				
1 oz./ft. <sup>2</sup> Mat	.61	.635	.675	.74
1½ to 3 oz./ft. <sup>2</sup> Mat	.58	.605	.645	.68
<u>United States</u>				
1 oz./ft. <sup>2</sup> Mat	.53	.566	.600	.67
1½ to 3 oz./ft. <sup>2</sup> Mat	.48	.518	.541	.61
<u>Differential</u>				
<u>Canada/United States</u>	- per cent -			
1 oz./ft. <sup>2</sup> Mat	16.2	12.2	12.5	11.1
1½ to 3 oz./ft. <sup>2</sup> Mat	22.1	16.8	19.2	12.4
<u>M.F.N. Tariff Rate</u> <u>of Duty</u>	25.0	25.0	25.0	25.0

(a) For comparable products: chopped strand mat for use in marine industries and contact moulding.

Source: Fiberglas Canada Limited and Owens-Corning Fiberglas Incorporated.

#### THE EFFECTS OF FIBREGLASS COSTS ON USER INDUSTRIES

The present level of protection provided the Canadian producer of fibreglass, and the consequent higher fibreglass prices, can have a substantial and significant effect on users of these materials. At the public sittings, spokesmen for user industries claimed that the relatively high tariff on glass fibres and filaments increased their costs of production to such a degree that their competitive position in the domestic market was seriously undermined. This section, therefore, will examine the proportion of total costs represented by fibreglass for a number of user industries and the extent to which these costs are in fact increased by the existing levels of protection.

The data used in this section were obtained by the Board through a number of surveys of domestic fibreglass users. The Board received a large number of returns from these surveys, encompassing a wide variety of manufactured products incorporating fibreglass. However, the number of returns dealing with each specific product was generally limited, and thus the actual figures cannot be revealed. The following discussion will, therefore, be confined to the general results of the analysis.

In order to determine the extra costs faced by a manufacturer using domestically produced fibreglass, factory costs were recalculated on the basis of U.S. fibreglass prices, without duty. The reduction



in factory costs arrived at, by applying U.S. prices, measures the cost to users of the level of protection actually utilized by Fiberglas Canada, not the cost of the level of protection provided by the tariff. In accordance with the present degree of tariff utilization, it could readily be ascertained what the additional cost of full tariff utilization would have been, as well as the impact on fiberglass users of possible tariff changes.

The incidence of tariff protection on glass fibres and filaments depends on the importance of these materials in total production cost, the actual tariff and the extent of tariff utilization. The following model exemplifies some of these relationships:

End-Product	Significance of Fibreglass	Current Tariff	Potential Additional Cost Due to Tariff (a)	Protection Utilized	Actual Additional Cost (a)
- per cent -					
A	10	40	2.9	25	2.0
B	5	25	1.0	10	0.5
C	50	20	8.3	20	8.3
D	50	40	14.3	5	2.4

(a) See footnote (b), Table 4-7.

As shown, a tariff of 40 per cent could have a very great impact on end-product D where fibreglass represents half of total production costs; if fully utilized it would add 20 per cent to its cost of production in Canada. However, in the case of end-product B it would add very little because not only is the tariff on the fibreglass input less than that for the input to end-product D, but it is also a much less significant component. However, Canadian end-product manufacturers have, at least in recent years, not had to carry the full impact of the tariff on fibreglass because, as demonstrated previously, Fiberglas Canada has not fully priced up to the tariff, so that the actual additional cost of the protection would be substantially lower, as demonstrated for end-products A, B, and D. The model also demonstrates that a lowering of the statutory rates to the level currently utilized would not provide any significant savings to users.

#### Manufacturers of Textile Products

Canadian weavers use fibreglass in the form of yarns, rovings and tire cord. Woven roving is not, itself, a final product because all woven roving is sold as an input for further use in the manufacture of reinforced plastics products. Yarns may be woven into products which are in their final form, or into intermediate products, such as cloth, which, like woven rovings, is used for reinforcement. Fibreglass tire cord is woven into tire fabric. There is only one independent tire fabric weaver in Canada, Dominion Textile Limited; most Canadian tire producers have their own weaving facilities.



Eight firms<sup>(1)</sup> responded to the Tariff Board survey of textile manufacturers using fibreglass. Responses to the survey included the largest weavers in Canada and the results are felt to be representative.

The survey showed that the percentage of total factory costs directly attributable to the cost of fibreglass inputs ranged from about one-quarter to one-half of the total factory costs of products woven from yarns, and to an even higher proportion for woven rovings and tire cord fabric. Inasmuch as Canadian-U.S. list price differentials in late 1975 were close to 20 per cent (see Table 4-5) it appears that the protection provided to rovings have added more than 10 per cent to the cost of woven rovings. As indicated earlier in this chapter, most Canadian and U.S. yarn prices are relatively close, as only a small proportion of the tariff on yarn is used. Consequently, the costs of production for yarn users have been comparatively little affected by the existing tariff; the maximum impact noted was 3 per cent. This figure would, of course, be considerably higher if the tariff on fibreglass materials were fully utilized. For woven rovings, full tariff utilization would have increased production cost in 1975 by more than 15 per cent, and for glass textiles by the same extent.

Such products as woven roving and tire fabric are not end-products but intermediate goods for use in other industries. The impact of higher Canadian prices of non-woven glass fibres and filament on such end-products would, in turn, depend on the importance of the woven glass products in the total cost of production of the end-products in question.

#### Manufacturers of Fibreglass Reinforced Plastics

Fibreglass is an essential ingredient of fibreglass reinforced plastic (FRP) products. However, its importance in terms of the total factory cost of these products was generally found to be small. Based on the Tariff Board survey, fibreglass costs as a percentage of total factory costs ranged from close to 3 per cent better than 40 per cent as shown in Table 4-7. The small number of responses for each particular end-product do not allow the actual product to be identified.

For most reinforced plastics the higher Canadian prices for fibreglass appear to add less than 5 per cent to total factory costs. In the marine market, the largest end-use market for fibreglass, the total impact of a fully utilized tariff on glass fibres and filaments would be to add at most about 5 per cent to the factory costs with respect to FRP canoes and less than 2 per cent for fully equipped power cruisers. However, because the tariff is not fully utilized, the additional costs for boats, resulting from higher Canadian fibreglass prices, actually range from about 1 to 3 per cent. As indicated by the following table, the cost impact on fibreglass reinforced products of the utilized tariff protection is relatively small.

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(1) Excluding the weaving facilities of tire manufacturers.

Table 4-7: Effect of Tariff for Glass Fibres and Filaments  
on Manufacturers of Fibreglass Reinforced Plastics,  
1974

<u>Fibreglass Input</u>	<u>Significance of Fibreglass</u>	<u>Current Tariff</u>	<u>Potential Additional Cost Due to Tariff (a)</u>	<u>Protection Utilized (b)</u>	<u>Actual Additional Cost (a)</u>
- per cent -					
A Roving	11.3	33.8	3.2	15.2	1.5
B Roving	41.4	33.8	11.0	23.3	7.8
C Roving	25.0	33.8	6.7	23.3	4.7
D Roving	7.2	33.8	2.0	23.3	1.4
E Mat	15.2	25.0	3.7	14.6	1.9
F Mat	8.7	25.0	1.8	17.4	1.3
G Mat	17.9	25.0	4.5	17.4	2.6
H Chopped strand	2.8	10.0	0.2	2.9	0.1

(a) To current production costs of Canadian users of Fiberglas Canada products.

(b) Based on prices applicable at volume of purchases.

Source: Based on Tariff Board survey of Manufactures of Fibreglass Reinforced Plastics.

In summary, it appears that the overall effect on users of glass fibres and filaments of having to pay higher input prices is somewhat less than is often represented. This is not only because fibreglass materials often are a relatively minor cost component, as in FRP products, but also because Fiberglas Canada does not price up fully to the tariff protection available. Even if glass fibres and filaments entered free of duty, most user industries could expect reductions in factory costs of 5 per cent or less. On the basis of this evidence it seems that the present tariff on glass fibres and filaments, to the extent that this protection is utilized, has not had a significant inhibiting effect on the development of Canadian industries using these materials.

#### THE EFFECTS OF ALTERNATIVE TARIFF LEVELS ON FIBERGLAS CANADA LIMITED

An analysis was also carried out to determine the impact of possible tariff changes on the Canadian producer of textile glass fibres and filaments. It can be said that a reduction corresponding to the unutilized portion of the tariff would affect neither the producer nor the users of glass fibres and filaments. However, with regard to reductions which go beyond that point it was clear that the impact would be much greater for the producer than the user.

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## CHAPTER V: TARIFF CONSIDERATIONS

### THE TARIFF ITEMS

The seven tariff items specifically referred to the Board by the Minister are set out in Chapter I. They are repeated below for convenience.

<u>Tariff Items</u>	<u>Goods Subject to Duty and Free Goods</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
*56005-1	Man-made fibres or glass fibres, not exceeding twelve inches in length ...	5 p.c.	10 p.c.	15 p.c.
*56010-1	Sliver, wholly or in part of man-made fibres or of glass fibres .....	5 p.c.	10 p.c.	15 p.c.
*56015-1	Man-made filaments or glass filaments imported for converting into lengths not exceeding twelve inches, for use in the manufacture of textile yarns or flock	5 p.c.	10 p.c.	15 p.c.
*56105-1	Yarns and rovings, wholly of man-made fibres or filaments or of glass fibres or filaments, not more advanced than singles, not coloured, with not more than seven turns to the inch .....	20 p.c.	10 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.
*56110-1	Yarns and rovings, wholly or in part of man-made fibres or filaments or of glass fibres or filaments, including threads, cords or twines, not containing wool or hair .....	22½ p.c.	10 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.
56117-1	Yarns, wholly of glass filaments, whether or not plied, for use in the manufacture of woven tire fabrics .....	17½ p.c.	5 p.c.	35 p.c.
	and, per pound		10 cts.	20 cts.

(Expires February 28, 1980)

<u>Tariff Items</u>	<u>Goods Subject to Duty and Free Goods</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
*56300-1	Clothing, wearing apparel and articles made from woven fabrics, and all textile manufactures, wholly or partially manufactured, the textile component of which is fifty per cent or more, by weight, of man-made fibres or filaments or of glass fibres or filaments, not containing wool or hair .....	20 p.c.	25 p.c.	50 p.c.

\*A tariff item bound under GATT (The General Agreement on Tariffs and Trade).

As already noted, these tariff items were specifically referred to the Board to the extent that they "relate to glass fibres, slivers, rovings, yarns, strand, and to non-woven batts and non-woven mats, but not including such goods as insulation, woven glass fabrics or items manufactured from glass fabrics." Only one of the tariff items refers exclusively to glass fibres or filaments; the remainder of the items include organic man-made fibres or filaments as well as inorganic glass fibres or filaments. Although the Minister also authorized the Board to include in its study such other tariff items as it might deem relevant, no such additional items were found.

Goods qualifying for entry under British Preferential Tariff, under tariff items 56105-1, 56110-1, and 56117-1, would take the M.F.N. rates of duty if the combined specific and ad valorem rates under that tariff were lower than the B.P. rate. Further under these three items, and under tariff item 56300-1, importers of goods subject to the B.P. rates of duties, meeting the conditions set forth in section 5 of the Customs Tariff, are entitled to a discount of 10 per cent of the amount of duty computed under the said Tariff.

Tariff items 56005-1, 56010-1, and 56015-1, were excluded by statute from the operation of the General Preferential Tariff. Further, one week before the coming into effect of the G.P.T., the other tariff items included in this Reference were withdrawn by Order-in-Council from the list of items to which this new tariff would apply.

All of the specifically referred items are drawn from Group X of the Customs Tariff which covers "Cotton, flax, hemp, jute, and other fibres, and silk, wool, and manufactures thereof." They obviously relate to textiles and have been administered as such; glass fibres not capable of being used in the textile industry are considered to be "mineral wool" and, as such, are classified under tariff item 68905-1. Products of glass wool which are used principally for insulation or filtration purposes, but which also include such goods as "angel's hair" for Christmas decorations, are not classified under items specifically referred to the Board and, like insulation, are considered



to be excluded from the Board's terms of reference. In this connection it should be noted that non-woven batts, although listed by the Minister as a form of the product to be included in the study, are, in fact, used as insulation; consequently these goods have not been further considered. In summary, the products referred to the Board are textile glass fibres and filaments and their derivatives such as strands, chopped strand, yarns, rovings, tire cord, chopped strand and other non-woven mats, and textile glass staple fibre, and its derivatives such as sliver, (staple fibre) rovings, spun yarns and mats.

Tariff items referring specifically to glass fibres and filaments were introduced with effect from April 1, 1960. Before that date glass fibres and filaments were grouped with man-made fibres and filaments under the term "synthetic textile fibres and filaments."<sup>(1)</sup> The temporary tariff item for glass tire cord yarn, 56117-1, was first introduced on June 2, 1970 and currently has been extended to February 28, 1980. Tariff item 56117-1 is not specifically bound under GATT because it was not introduced until after the Kennedy Round negotiations. If the temporary item were not renewed, the products covered would be subject to tariff item 56110-1; the maximum rates possible, therefore, are those bound under tariff item 56110-1.

The tariffs established April 1, 1960 remained unchanged until the Kennedy Round of GATT negotiations. The reductions negotiated under the GATT, and their timing, are shown in Table 5-1. Except for a reduction in the specific portion of the G.T. rates under tariff items 56105-1 and 56110-1 (Gen. rates are not negotiated under GATT), the only change in rates were with respect to the M.F.N. rates. The M.F.N. rates under tariff items 56110-1 and 56105-1, for yarns and rovings, were more than halved, both for the specific and ad valorem portion, while the rates for tariff items 56005-1, 56010-1, 56105-1 and 56300-1, affecting mainly chopped strand and mat, all declined by 2½ percentage points.

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(1) That volume of Tariff Board Reference No. 125 dealing with synthetic textiles, 1959, p. 94; "..., for the first time, glass is being recognized in the tariff structure as a man-made product which has textile applications - not only in respect of yarns, but of fabrics and of manufactured end-products, (e.g., curtains and drapes)." The history of the tariff items relating to synthetic textile fibres and filaments is given in the aforementioned volume of Reference No. 125, pp. 247-251.

Table 5-1: Canadian Tariff Relating to Glass Fibres and Filaments -  
Timing of Reduction Resulting from GATT Negotiations (M.F.N.)

		<u>1967</u>	<u>Jan. 1, 1968</u>	<u>Jan. 1, 1969</u>	<u>June 4, 1969, and Current</u>
56005-1	Man-made fibres or glass fibres, not exceeding twelve inches in length .....	12½ p.c.	12 p.c.	11½ p.c.	10 p.c.
56010-1	Sliver, wholly or in part of man-made fibres or of glass fibres .....	12½ p.c.	12 p.c.	11½ p.c.	10 p.c.
56015-1	Man-made filaments or glass filaments imported for con- verting into lengths not exceeding twelve inches, for use in the manufacture of textile yarns or flock .....	12½ p.c.	12 p.c.	11½ p.c.	10 p.c.
56105-1	Yarns and rovings, wholly of man-made fibres or filaments or of glass fibres or fila- ments, not more advanced than singles, not coloured, with not more than seven turns to the inch .....	22½ p.c.	20 p.c.	17½ p.c.	10 p.c.
	and, per pound	22 cts.	2 cts.	4 cts.	10 cts.
	except that on goods valued at less than one dollar per pound the duty under the Most- Favoured-Nation tariff shall be .....		2 p.c.	4 p.c.	
	and, per pound		19.6 cts.	17.2 cts.	
56110-1	Yarns and rovings wholly or in part of man-made fibres or filaments or of glass fibres, or filaments, including threads, cords or twines, not containing wool or hair .....	22½ p.c.	20 p.c.	17½ p.c.	10 p.c.
	and, per pound	22 cts.	2 cts.	4 cts.	10 cts.
	except that on goods valued at less than one dollar per pound the duty under the Most- Favoured-Nation tariff shall be .....		2 p.c.	4 p.c.	
	and, per pound		19.6 cts.	17.2 cts.	

Table 5-1 (concl.)

	<u>1967</u>	<u>Jan. 1, 1968</u>	<u>Jan. 1, 1969</u>	<u>June 4, 1969, and Current</u>
56300-1 Clothing, wearing apparel and articles made from woven fabrics, and all textile manufactures, wholly or partially manufactured, the textile component of which is fifty per cent or more, by weight, of man-made fibres or filaments, or of glass fibres or filaments not containing wool or hair ...	27 $\frac{1}{2}$ p.c.	27 p.c.	26 $\frac{1}{2}$ p.c.	25 p.c.

Source: Canadian Customs Tariff.

The fibreglass products falling within the Board's terms of reference are classified under the various tariff items as follows:

<u>Tariff Items</u>	<u>Commodities Pertaining to Reference*</u>
56005-1	Textile glass "staple fibres," "chopped strand," "milled fibres";
56010-1	Textile glass "sliver";
56015-1	Textile glass filament "strand" or "roving" for conversion into staple fibres for use in the manufacture of "spun yarn";
56105-1	Textile glass filament yarn, spun yarn, roving, "staple fibre roving," or strand;
56110-1	As in 56105-1, but broader coverage to include plied yarn, cord, twine, vinyl-covered yarn etc.;
56117-1	Textile glass tire cord and yarn;
56300-1	Textile glass fibre or filament reinforcing "mat."

\*See Chapter I for definitions.

All glass fibre and filament products normally entering under the above tariff items are included in this study, except certain goods which are classified under tariff item 56300-1. This item includes goods manufactured from woven fabrics, which have been specifically excluded from this study, and "non-woven fabrics." These are fabrics which, although they often have the texture and appearance of woven

fabrics, consist of yarns or strands bonded or joined by some means other than weaving. Although the Minister did not specifically exclude any such non-woven fabrics, he specifically included only "non-woven mats." Glass fibre or filament "mat," as defined in Chapter I, requires that the fibres or filaments be "deposited in a random formation," and as such has a radically different form from other non-woven fabrics. The Board has excluded non-woven fabrics other than "mat" from this study.

#### IMPORTS BY TARIFF ITEM

In 1973, the estimated \$2.3 million of fibreglass imports accounted for only 1 per cent of the \$240 million of imports under the referred tariff items. Excluding tariff item 56117-1 (glass yarns for tire fabrics), fibreglass accounted for less than 1 per cent of the total imports under each of the referred tariff items, with the exception of tariff item 56105-1 where it accounted for 3.3 per cent. In addition, there were no imports of fibreglass under tariff item 56015-1 in 1973. Imports under tariff item 56005-1 are virtually all of chopped strand and milled fibre; the nomenclature problems related to these imports will be discussed later in this chapter. Of the total value of textile glass fibre and filaments imported in 1973 less than 6 per cent entered under tariff items with a M.F.N. rate of 10 p.c. (Table 5-2). The bulk of the imports therefore, enter under the items with rates of duty exceeding an equivalent of  $17\frac{1}{2}$  p.c., and more than three-quarters at rates exceeding 25 p.c.

Table 5-2: Distribution of Estimated Fibreglass Imports  
by Tariff Item, 1973

<u>Tariff Items</u>	<u>Fibreglass Imports as Percentage of Total Imports Under Tariff Items</u>	<u>Percentage of Fibreglass Imports</u>
	- per cent -	
56005-1	0.7	5.4
56010-1	*	0.1
56015-1	-	-
56105-1(a)	3.3	15.9
56110-1(a)	1.0	41.2
56117-1	100.0	17.9
56300-1(b)	0.4	19.6
Total	1.0	100.0

(a) Tariff items 56105-1 and 56110-1 include both yarns and rovings, and in terms of value of imports, are split fairly evenly between the two products, although a much higher quantity is of the lower valued rovings.

(b) Reinforcing mat only.

Source: Customs documents tabulated by Statistics Canada.

The lowest rates of duty for glass fibres and filaments are for those imports qualifying for entry under the British Preferential (B.P.) Tariff coming from those present and former Commonwealth countries and territories to which this tariff status has been accorded. From evidence gathered by the Board, applicable imports entering under the B.P. Tariff appear to constitute something less than 2 per cent of all relevant imports. Thus, margins of preference appear not to have been important in the trend or composition of fibreglass imports.

#### COMPARISON OF CANADIAN AND FOREIGN RATES

Except for the two tariff items relating to glass filaments and yarns for use in the manufacture of tire cord fabric (56117-1 and 56237-1), there are no items in the Canadian tariff which relate exclusively to textile glass fibres and filaments. The Canadian nomenclature is thus in direct contrast to the Brussels Nomenclature and also to the United States tariff, where most items relating to glass fibres and filaments do so to the exclusion of all other synthetic fibres and filaments.

The United States M.F.N. equivalent tariff rates, applying in 1976 for products relevant to this Reference are shown in Table 5-3. The United States tariff schedules make the distinction between textile and non-textile fibreglass products on the basis of their applicability in the textile industry.<sup>(1)</sup> Glass fibres and filaments and their products are considered to be textile industry products only if they are in a form suitable for the manufacture of yarns, cordage or woven fabrics, or if present in fabrics or other articles in the form of yarns or cordage. Articles which are not considered to have met the aforementioned requirements are classified under the schedule relating to non-metallic minerals and products.

Whether or not the relevant fibreglass products are classified in the United States under the textile schedule or the non-metallic mineral schedule, the products are all considered to be of "textile type" fibre. Production of these glass fibres and filaments is classified under Glass Products Industries by the United States Census of Manufactures as Glass Fiber (Textile Type Fiber),<sup>(2)</sup> but for tariff purposes it is recognized that only some of the articles have direct textile applications. In Canada, textile-type glass production is classified by the Census of Manufactures under Man-Made Fibre, Yarn and Cloth Mills, Fibre and Filament Manufactures.<sup>(3)</sup> All articles produced are considered to be applicable for textile purposes, and for tariff purposes all articles are, at present, classified under the textile tariffs.

(1) The distinction is set forth in a footnote, appended to Table 5-3, p. 9.

(2) Industry Code No. 32293, United States Census of Manufacturers.

(3) SIC No. 1831.



Table 5-3: United States Tariff Schedules, Items Relating to Glass Fibres and Filaments

Item	Stat. Suffix	Articles	Rates of Duty		Products Covered in Item
			1	2	
		Grouped filaments and strips (in continuous form), whether known as tow, yarns, or by any other name: Wholly of grouped filaments (except laminated filaments and plexiform filaments):			Two or more continuous filaments which are parallel and untwisted, not usable as yarns. Includes untwisted strand and filament roving.
		Of glass:			
	309.28 00	Not colored .....	10.5% ad val.	50% ad val.	
	309.29 00	Colored .....	15% ad val.	60% ad val.	
		Fibers (in noncontinuous form), whether known as cut fiber, staple, or by any other name, not carded, not combed, and not otherwise processed: Wholly of filaments (except laminated filaments and plexiform filaments):			Glass fibres not over 30 inches in length. Includes staple fibre, chopped strand, milled fibres, and all cut filaments of textile glass fibre.
...					
309.43	50	Other .....	7.5% ad val.	25% ad val.	Sliver, (staple fibre) roving, and top, of glass staple fibres.
309.80		Textile fibers, of man-made fibers, carded, combed, or otherwise processed but not spun: In chief value, but not wholly, of man-made fibers .....	12¢ per lb. + 15% ad val.	45¢ per lb. + 65% ad val.	
309.90	00	Wholly of man-made fibers .....	2.5¢ per lb. + 7.5% ad val.	10¢ per lb. + 30% ad val.	



Table 5-3: United States Tariff Schedules, Items Relating to Glass Fibres and Filaments (concl.)

Item	Stat. Suffix	Articles	Rates of Duty		Products Covered in Item
			1	2	
		Yarns of man-made fibers:			
		Of glass:			All glass yarns wholly or in chief value of glass fibre and filaments, with some twist.
309.98	00	Not colored .....	10.5% ad val.	50% ad val.	
309.99	00	Colored .....	15% ad val.	60% ad val.	
...					
540.71	00	Glass fibers in bulk; glass fibers in the form of mats, batts, blankets, felts, pads, casings and boards, all the foregoing, of a density not over 25 pounds per cubic foot, whether or not coated, impregnated, or bonded with glue, plastics, or other substances, or lined, backed, or supported with paper, paper-board, fabrics or similar material, or with metal mesh or foil; glass-fiber filters, with or without their frame-works or supports; and articles not specially provided for, of glass fibers	11% ad val.	50% ad val.	Reinforcing mat. (Other products covered under this item are excluded from this Reference.)

Notes: United States Tariff, Schedule 3 - Textile Fibers and Textile Products, Part 1., Subpart E. - Man-made Fibers, headnotes: "2.(c) The provisions of this subpart applicable to grouped filaments and fibers include grouped glass filaments and glass fibers produced therefrom, suitable for the manufacture of yarns, cordage, or woven fabrics. For the purposes of the provisions of the tariff schedules applicable to articles of man-made fibers, glass filaments and glass fibers shall be treated as man-made fibers only if they have been made into yarns or cordage, or if they are present in fabrics or other articles in the form of yarns or cordage."

Source: Tariff Schedules of the United States Annotated (1976).

The articles which have a direct textile application, i.e., yarn, strand, staple fibre yarn, and continuous filament rovings, are dutiable in the Tariff Schedules of the United States at 10.5 per cent ad valorem if not coloured, or 15 per cent ad valorem if coloured. Chopped strand, milled fibres, and other textile glass staple in bulk are subject to a 7.5 per cent ad valorem duty; staple fibre sliver and staple fibre roving are subject to a specific duty of 2.5 cents per pound plus 7.5 per cent ad valorem, when made entirely of glass fibres, or 12 cents per pound and 15 per cent ad valorem when glass fibres are the chief component of value. Chopped strand mat and continuous strand mat are not considered to be in a form which is applicable to the textile industry and are dutiable at 11 per cent ad valorem, whether or not coloured.

Canadian and U.S. tariff rates for fibres, sliver, and filaments for conversion to fibres are approximately the same, with the exception of imports entering the United States under item 390.80, where the U.S. rate is considerably higher. For all other fibreglass products, such as yarn and roving, the U.S. rates are substantially lower.

The United States tariff reductions following the Kennedy Round of the GATT negotiations are shown in Table 5-4. A comparison of pre-Kennedy Round rates indicates that the difference between Canadian and U.S. rates on fibreglass has narrowed substantially, with the exception of that for reinforcing mat, which rose from 5.5 percentage points in 1967 to 14 percentage points in 1972. United States tariffs declined more for fibres, sliver, filaments not further processed and mat, while for yarns and rovings the Canadian rates made the greater absolute adjustment.

The Board also examined the provisions for glass fibres and filaments in the customs tariff schedules of a number of countries other than the United States. All these countries use the Brussels Nomenclature (BTN). As noted elsewhere in this chapter, all glass fibres and filaments covered by this Reference are classified under Heading 70.20; however, this Heading may be subdivided in any way that a country desires. The BTN Heading includes not only the textile-type glass fibres and filaments, yarns, fabrics and articles made therefrom, but also glass wool and the articles made therefrom. The rates quoted in Table 5-5 are those applicable to glass fibres and filaments classified under that Heading, according to the latest editions of these tariffs available to the Board at the time of writing.

Table 5-4: United States M.F.N. Equivalent Tariff Relating to Glass Fibres and Filaments, 1967-1972(a)

Item	Stat. Suffix	Articles	M.F.N. Equivalent Rates						
			<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	
		Grouped filaments of glass:							
309.28	00	Not colored .....	21 p.c.	18.5 p.c.	16.5 p.c.	14.5 p.c.	12.5 p.c.	10.5 p.c.	
309.29	00	Colored .....	30 p.c.	27 p.c.	24 p.c.	21 p.c.	18 p.c.	15 p.c.	
309.43	50	Glass fibers (non-con- tinuous) not further processed: .....	15 p.c.	13 p.c.	12 p.c.	10 p.c.	9 p.c.	7.5 p.c.	
		Textile glass fibers (non-continuous) further processed but not spun:							
309.80	00	Chiefly but not wholly of man-made fibers .....	25¢ per lb. + 30 p.c.	22¢ per lb. + 27 p.c.	20¢ per lb. + 24 p.c.	17¢ per lb. + 21 p.c.	15¢ per lb. + 18 p.c.	12¢ per lb. + 15 p.c.	
309.90	00	Wholly of man-made fibers .....	5¢ per lb. + 15 p.c.	4.5¢ per lb. + 13 p.c.	4¢ per lb. + 12 p.c.	3.5¢ per lb. + 10 p.c.	3¢ per lb. + 9 p.c.	2.5¢ per lb. + 7.5 p.c.	
		Glass yarns:							
309.98	00	Not colored .....	21 p.c.	18.5 p.c.	16.5 p.c.	14.5 p.c.	12.5 p.c.	10.5 p.c.	
309.99	00	Colored .....	30 p.c.	27 p.c.	24 p.c.	21 p.c.	18 p.c.	15 p.c.	
540.71	00	Glass fiber mats .....	22 p.c.	19.5 p.c.	17.5 p.c.	15 p.c.	13 p.c.	11 p.c.	

(a) There were no changes in the M.F.N. equivalent rates for the years 1973 to 1976.

Source: Tariff Schedules of the United States, Annotated (1975 and 1976).

Table 5-5: Rates Relating to Glass Fibres and Filaments, Selected Countries

	Item	General	M.F.N. or Equivalent	Preference
Australia (1975-76)	70.20.11	Sliver; rovings; chopped strand; chopped strand mat or, if higher, per kg	22½ p.c. \$0.20	22½ p.c. \$0.20
	70.20.2	Yarns; cords and cordage; braids; fabrics:		
	70.21.21	Plastic coated yarns	34 p.c.	26 p.c.
	70.20.22	Cords and cordage; braids including tubular braids; woven fabrics of a kind ordinarily used for industrial purposes but not including fabric of a kind used solely or principally as insect screening	30 p.c.	22½ p.c.
	70.20.29	Other	22½ p.c.	15 p.c.
	70.20.9	Other	17 p.c.	9 p.c.
	70.20.01	Glass fibres (including wool)	37 p.c.	
Brazil (1973-74)	70.20.03	Yarns	20 p.c.	
	70.20.04	Cords and cables	20 p.c.	
	70.20.05	Slivers or rovings	20 p.c.	
	70.20.06	Glass fabrics plain	20 p.c.	
	70.20.07	Glass fabric printed	37 p.c.	
	70.20.99	Other	20 p.c.	

Table 5-5: Rates Relating to Glass Fibres and Filaments, Selected Countries (cont.)

		<u>Item</u>		<u>General</u>	<u>M.F.N. or Equivalent</u>	<u>Preference</u>
Japan (1974-75)	70.20	1.	Fabrics of glass fibre	20 p.c.		Free
				20 p.c.	10 p.c.	Free
				20 p.c.	8 p.c.	Free
				20 p.c.	10 p.c.	Free
				20 p.c.	10 p.c.	Free
South Africa (1972-73)	70.20.20	2.	Continuous filament fibres and yarns	20 p.c.	20 p.c.	
				20 p.c.	20 p.c.	
				50 p.c.	10 p.c.	
				10 p.c.	10 p.c.	
				20 p.c.	10 p.c.	
EEC (1975-76)	70.20	A.	Non-textile <u>fibre</u> and articles made therefrom	19 p.c.	11 p.c.	
				23 p.c.	13 p.c.	

Table 5-5: Rates Relating to Glass Fibres and Filaments, Selected Countries (concl.)

Item	M.F.N. or		Preference
	General	Equivalent	
U.K. & Northern Ireland (1976)			
70.20			
A. Non-textile fibre and articles made therefrom:	11 p.c.	EEC - 2 p.c. Commonwealth - 8.8. p.c.	
Chopped strand			Free
Chopped strand mat and continuous strand mat			
Other			
B. Textile fibre, yarns, fabrics, and articles made therefrom:			
Yarns		12.4 p.c. EEC - 2 p.c. Commonwealth - 10.4 p.c.	Free
Fabrics (including narrow fabrics)			
Grey			
Other			
Roving			
Other			

Source: The International Customs Journal, International Customs Bureau, Brussels.



Before its entry into the EEC, Britain granted free entry to all glass fibre articles from Commonwealth countries; Britain is now gradually adjusting its rates to the common external rates of the EEC. The EEC tariff is divided into two parts, non-textile and textile, according to the application of the glass fibres and filaments. The non-textile glass fibres and related articles, which include chopped strand and glass fibre reinforcing mat, as well as glass wool, enter at the conventional (i.e., M.F.N.) rate of 11 per cent ad valorem.<sup>(1)</sup> The EEC rates for rovings, yarns, and fabrics do not differentiate as to degree of processing; all these goods enter at 13 per cent. The Japanese tariff accords free entry to glass fibre articles from lesser developed countries and applies a rate of 10 per cent to most imports from GATT countries.

Japan, the EEC, and the United States all have highly developed glass fibre industries. They account for upwards of 90 per cent of all textile glass fibres and filaments produced in the non-communist world. The M.F.N. or equivalent dutiable rates applicable to articles covered under this Reference range from 7.5 to 13 per cent.

In addition to the tariffs of the larger producing areas, the Board also studied the tariffs of some countries which, like Canada, have textile-type glass plants serving mainly the domestic market.<sup>(2)</sup> Both South Africa and Brazil generally applied rates of 20 per cent to M.F.N. equivalent imports of the relevant textile-type glass articles. Australia had M.F.N. rates of 22.5 per cent, or \$0.20 per kg, whichever is higher, for imports of sliver, rovings, chopped strand and chopped strand mat, 26 p.c. for plastic coated yarns, and 22½ p.c. for other articles.

As may be seen from the foregoing, the Canadian rates for glass fibres and filaments and articles produced therefrom are, with the exception of glass fibres, sliver, and glass filaments for converting into fibres, substantially higher than those applied by the major producing areas of the world. With respect to yarns and rovings they also are somewhat higher than the rates of countries with relatively small textile glass industries.

#### THE BRUSSELS NOMENCLATURE

The Board has examined the feasibility of using the "Nomenclature for the Classification of Goods in Customs Tariffs" commonly known as the Brussels Nomenclature (BTN).

The BTN is intended to cover all goods normally traded in international commerce. It is the basis of the customs tariffs of most of the major trading nations of the world; the principal exceptions are Canada, the United States and the state-trading countries. The Nomenclature is published by the Customs Co-operation Council, in Brussels, of which Canada is a member. The Council and its committees are responsible for the revision of the Nomenclature and related publications, as required; they also assist national customs administrations in the interpretation and application of the BTN.

(1) Canadian and United States duties are levied on values for duty, f.o.b. country of origin, while all rates shown in Table 5-5 refer to rates levied on c.i.f. value of goods.

(2) Latest tariff available to the Board at time of writing.

In the BTN, goods are grouped into 21 Sections which are divided into 99 Chapters which, in turn, are subdivided into a large number of Headings. The BTN does not attempt to specify all individual products by name, and, in each Chapter, there is usually a residual Heading to provide for products which would be difficult to classify under the more specific Headings of the Chapter. These residual Headings are similar, in concept, to the "basket" items in the Canadian Customs Tariff. The classification of individual products is affected by the application of "Section Notes" and "Chapter Notes," which form an integral part of the BTN system and may lead either to the inclusion or exclusion of goods from specific Sections, Chapters or Headings. Further, there are four general "Rules for the Interpretation of the Nomenclature" which are to be used when classification cannot be effected through the wordings of the Headings and the Section Notes and Chapter Notes.

In addition to the Nomenclature itself, the Customs Co-operation Council publishes the "Explanatory Notes to the Brussels Nomenclature." These Notes explain, in some detail, the coverage of each Section, Chapter and Heading and give numerous examples of products classified in the various Headings, particularly for products which may pose problems of classification; they also illustrate the application of the Section Notes and Chapter Notes. The Explanatory Notes constitute a valuable aid to the determination of the Heading appropriate to a particular product. The Council publishes also a "Compendium of Classification Opinions" which contains agreed opinions regarding the appropriate classification of particular products, to ensure the uniform application of the Brussels Nomenclature internationally.

Nothing precludes any country using the BTN from subdividing any Heading for the purpose of applying different rates of duties to different products of the Heading, or for statistical purposes; however, in subdividing a Heading it is not the practice to make provision for goods covered by other Headings or to exclude any products intended to be covered by the Heading being subdivided. Such action would require the revision of the relevant Chapter Notes and Explanatory Notes to the BTN and might make their use impossible, thus impairing the usefulness of the BTN in providing a widely accepted, uniform system of classification of the goods entering international trade, for customs and statistical reporting purposes.

Chapter 70 of the BTN forms part of Section XIII; it provides for glass and glassware. All products included in this Reference, together with those glass fibre products which have been specifically excluded from the Reference are in Heading 70.20. The Heading is worded: "Glass fibre (including wool), yarns, fabrics, and articles made therefrom."

As noted above, any Heading may be subdivided. Examples may be seen in Table 5-4. These extracts illustrate the broad coverage of Heading 70.20. Virtually all glass fibres and filaments and articles therefrom are included under this Heading, so that in order to adopt in full this one Heading of the BTN it would be necessary to change a large number of tariff items and deal with a number of products not included in this Reference. The problem does not exist for those countries that have adopted the whole of the BTN. However, for Canada it does not appear to be feasible at this time to adopt or adapt this single BTN Heading.

PROPOSALS AND REPRESENTATIONS

Fibreglas Canada Limited contended at the public sittings and elsewhere that with respect to imported glass fibres and filaments the existing rates and structure of tariff items 56015-1, 56105-1, 56110-1, 56117-1, and 56300-1 should remain unchanged and that the rates should be raised in the case of tariff items 56005-1 and 56010-1. It was asserted that continuous filament production was a marginal operation which would have to be curtailed or eliminated in the case of a reduction in present rates. The company stated that it enjoys an exclusive manufacturing position in Canada because it is the only firm to date which has been prepared to invest heavily both in facilities and market development, and that there are no patent or other restrictions on other companies manufacturing in Canada. It was argued that the fibreglass products under tariff items 56005-1 and 56010-1 are subject to the same degree of processing as the products covered under the other relevant tariff items. Although no particular rates were proposed, in effect the company was asking for a more uniform structure.

Two Canadian weavers, although not submitting their own briefs, made comments to the Board in support of the retention of the existing rates. A third weaver, Ferro Enamels (Canada) Limited, which also acts as a distributor of fibreglass reinforcing mat for its U.S. parent company, submitted in a brief to the Board that it had for some time been considering establishing its own glass filament production facilities in Canada. The Ferro Enamels brief reads in part as follows:

....If, as we see it, it is in the best interests of Canada to support and encourage primary and secondary manufacturing industries, it must be recognized that the high labour cost content and the increasing costs of pollution and emission control equipment create cost factors which are not built into products imported from certain other countries. In addition, it must be remembered that in many respects, the Canadian market in terms of its size and area is not an economically viable unit for the manufacture of a product involving both a high capital content and high labour and production costs.

Nonetheless, it is Ferro's present view that with the use of the advanced production techniques and equipment available today, it can compete in these fields with Fibreglas Canada Limited. Such competition would be in our opinion of benefit both to the technology of the fiber glass industry and to the Canadian industries using these materials. However, this competition will not come about if the customs tariff is reduced in any material respect.<sup>(1)</sup>

Views of tire manufacturers who are members of The Rubber Association of Canada,<sup>(2)</sup> were presented to the Board in a brief submitted by the association. This brief concerned itself not only with glass tire yarn (tariff item 56117-1), but also with woven tire fabrics of fibreglass (tariff item 56237-1) which were specifically excluded from this Reference. It is noted that the Rubber Association's

(1) Transcript, Volume II, pp. 290-291.

(2) Michelin Tires Manufacturing Company of Canada Limited which is not a member of the Rubber Association did not submit a brief to the Board. Michelin is not known to make use of fibreglass tire cord.

proposals were the same for both tire yarn and tire fabric. The proposals, and the reasons for them, were summarized in the association's brief:

The use of tariffs to protect the Canadian manufacturer is fully appreciated. However, we do not believe there is justification for a higher level of protection than that existing for other tire cord and woven tire cord fabric (12.5%).

It was recognized in 1970 that the sole manufacturer of fibreglass in Canada had just set up business involving a substantial investment in machinery and equipment, and was therefore entitled to enjoy some tariff protection in recovering some of these costs. It is felt that the supplier is now well established, and the current level of tariff protection is no longer required.

Since February 1973 when the tariff protection on tires was reduced from 17.5% to 12.5%, it has been even more imperative that the competitive position of the Canadian tire industry be maintained.

As the cost of materials makes up roughly 50% of the total factory cost of an automobile tire, it is essential that these materials be obtained at the lowest possible cost.

For the above reason the tire industry strongly urges that the MFN levels of duty applicable to temporary tariff items 56117-1 (3% and 10¢ per pound) and 56237-1 (17.5%) be reduced to 12.5% or 11¢ per lb. (as in 56115-1) or 12.5% (as in 56235-1).<sup>(1)</sup>

Implementation of the Rubber Association's proposals would have an effect primarily on tires produced for the domestic replacement tire market. Imports of tire cord used in tires produced for the export market or on original equipment exported under the Canada-United States Automotive Agreement are eligible for a duty drawback and are therefore not affected by rates of duty; Fiberglass Canada provides export rebates with respect to tire cord for these two markets that, in effect, equate U.S. and Canadian prices. Reduction of the applicable rates of duty to the proposed 12½ p.c. would in fact have little or no effect on domestic prices of tire cord for use in the replacement tire market if, as it appears, the protection provided in excess of this level under tariff item 56117-1 is currently not utilized. Such a reduction would, however, allow Canadian tire manufactures utilizing the alternative type of glass tire cord, which is not produced domestically, to import their requirements at a lower cost. It should be noted that the reference by the Rubber Association to materials making up 50 per cent of factory cost was to the cost of all material inputs and not just to glass tire cord, which accounts for less than 5 per cent of the factory cost of producing tires.

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(1) Transcript, Volume III, page, 319.



Briefs and comments submitted to the Board by Canadian reinforced plastics manufacturers and pleasure craft manufacturers were virtually unanimous in their contention that the tariff protection afforded glass fibres and filaments should be reduced. In many briefs it was noted that the present tariff structure did not follow the "usual" structure of the Canadian tariff, in that the end-products using fibreglass as an input have a lower rate of protection than the fibreglass materials themselves. Consequently, Canadian manufacturers of fibreglass reinforced plastic products believed themselves to be at a serious disadvantage against the U.S. producer who was able to purchase his raw materials at much lower prices. As an alternative to lower rates of duty on imports of fibreglass, several manufacturers suggested that the rates of duty on reinforced plastic products be raised.

A common objection noted in the briefs and comments was that Fiberglas Canada is a "monopoly" with respect to the production of continuous filament glass fibres. It was contended that, because the present rates on fibreglass were prohibitive, Fiberglas Canada was able to follow a monopolistic pricing policy, setting the prices of their products only marginally below the duty-paid prices for competitive imports. Further, it was claimed that some fibreglass materials could not be obtained domestically, because Fiberglas Canada, as a monopolist, restricted its production to goods which were highly profitable.

There were also some comments which dealt mainly with the tariff structure respecting woven fabrics of fibreglass. These woven articles are, however, outside the terms of this Reference.

Many submissions to the Board included specific recommendations concerning the tariffs on fibreglass. These proposals are summarized below.

Removal of Tariffs - A few boat producers proposed that all duties on fibreglass be eliminated. It was argued that there should not be any tariffs which serve only to protect a monopoly and that increased activity in the user industries would substantially outweigh any losses to Fiberglas Canada Limited.

Removal of End-Use Restrictions on Tariff Item 56015-1 - Atlas Asbestos Company proposed that the end-use requirement "for use in the manufacture of textile yarns or flock" be removed from tariff item 56015-1 and that fibreglass rovings and strand be allowed to enter under this tariff item without any restriction to end-use. This company argued that the protection of 17½ per cent that it received on its products was insufficient because U.S. producers could obtain their fibreglass inputs at substantially lower prices. Atlas argued that in the Tariff Board's report on Reference No. 125, an item had been proposed with a wording that did not restrict end-use.

Removal of the end-use restrictions in tariff item 56015-1 would, in effect, create two tariff items for fibreglass roving and strand, based upon the form in which the products are used. Rovings that were used in continuous form, such as for filament winding or woven roving, would be subject to tariff item 56105-1, while rovings that are chopped up before use, such as for manufacturing chopped strand mat, as the Atlas Asbestos Company does, or for certain "spray-up" operations

in manufacturing boats, would be accorded the lower rate of duty available under tariff item 56015-1. There would then be two tariff items under which the same product could enter depending solely on the production technique to be used in the user's further manufacturing processes.

Special Consideration for Translucent Panels - Graham Products Limited proposed that all glass fibres and filaments for use in the manufacture of translucent panels, including roving, strand, or mat, be allowed to enter under tariff item 56015-1. The Graham submission stated:

We have considerable difficulty in competing in our home market because of the high raw material costs and the low import duty on the finished product. We are denied the export market to the U.S. because of their high import duty....<sup>(1)</sup>

In effect, this proposal called for the establishment of a new end-use item for all fibreglass materials used in the manufacture of translucent panels, with 10 p.c. rate now applicable to goods entering under tariff item 56015-1. Roving and strand, for this use, are currently dutiable at a rate of 10 per cent ad valorem plus 10 cents a pound and mat at 25 p.c.

In comments to the Board subsequent to the public sittings both Graham Products and Atlas Asbestos complained of seasonal dumping of consumer panels. It was alleged by the companies that the only conceivable explanation for the ability of foreign producers to export to Canada at these lower prices would be lower raw material costs.

Exemption from Duty - Materials for Use in the Manufacture of Pleasure Craft - The Government of New Brunswick stated in a letter to the Board in connection with Reference No. 149 - Pleasure Craft, that:

We agree with the Chestnut Canoe Company's contention that the rates of duty under tariff items 44002-1, 44003-1, and 44004-1 should remain unchanged but would suggest a new tariff item covering the importation of fibreglass fabric and mat for use in the manufactures of boats and canoes should be introduced. Materials for the purpose of manufacturing boats and canoes should be imported free of duty or at least rates lower than those applied on finished boats and canoes.<sup>(2)</sup>

An exemption or at least lower rates for the pleasure craft industry was often urged in connection with Reference No. 149. As in the case of the Graham Products proposal, this particular proposal implies the establishment of a separate tariff item with special consideration for a particular industry.

(1) Transcript, Volume III, page 409.

(2) Transcript, Volume III, page 461.



Reduction of Duty to 10 Per Cent or Less - ICL Engineering Limited proposed that the rate of duty on imports of glass rovings should be lowered to 10 per cent or less. ICL also proposed that Fiberglas Canada be allowed to import rovings duty-free. It was felt that this arrangement would allow Fiberglas Canada to produce the basic supply in Canada and to meet peak period demand through imports without having to make additional capital investments. The ICL proposal would have the advantage of providing Fiberglas Canada with the opportunity of operating close to full capacity at all times; excess domestic demand would be met by imports and domestic expansion would take place only when warranted by the volume of such imports. However, it is conceivable that such expansion might not take place at all, because Fiberglas Canada would be in a unique, and potentially profitable position, as the sole importer with duty-free access to the Canadian market. A reduction in the rate of duty on rovings would, it is evident, benefit users of this fibre-glass material.

Maintenance of Present Rate for Chopped Strand - J. Ford and Co. Limited proposed that the 10 per cent rate of duty under tariff item 56005-1, applicable to chopped strand, remain unchanged. This proposal was urged on the grounds that imports were mainly of a type not manufactured in Canada. If these imports are not strictly competitive with Canadian production, any increase in the rate of duty would not increase the demand for domestic chopped strand but would serve only to increase the costs of production of the user of this material.

Reduction of Rate of Duty to 8 Per Cent - Northwest Industries Limited proposed that the rate of duty on all fibreglass intermediate products be lowered to 8 per cent.

The implications of the specific rate proposals will be discussed later in this chapter.

#### TARIFF STRUCTURE AND NOMENCLATURE

Any changes in rates of duty or nomenclature resulting from this Reference must, under the terms of reference set forth in the Minister's letter, deal only with glass fibres and filaments, to the exclusion of all other products covered by the applicable tariff items. Any changes in duties would therefore require a new tariff structure and nomenclature which, as opposed to the existing tariff structure, would concern itself solely with textile glass fibres and filaments.

Another issue that emerges is as to whether a new tariff schedule with respect to glass fibres and filaments ought to provide for differentiation based on the application or end-use of the fibreglass. Moreover, the question arises as to whether it would be more desirable and practical to have one all-inclusive item encompassing all the commodities under study, or a number of tariff items corresponding to the main products or groups of products.

In the Canadian context, this Reference deals with a single-plant industry, and with a number of cost elements which are best measured at the plant or firm level, and which are difficult to break down on a product basis. Furthermore, in reinforcing, the main and fastest growing application of fibreglass, it can be argued that use of various fibreglass products is interchangeable, and that a single industry level

of protection might be preferable to differential product protection. A broadly worded item, with a single rate applying to all relevant fibreglass products, would permit the Canadian producer to exercise a great deal of sensitivity or response to the competitive situation of Canadian users, while maintaining the viability of the operation as a whole. As it does now, the producer could price well below the tariff for some products, possibly even at less than total cost, while for others it would be able to price fully up to the tariff.

It should be noted, however, that, in order to allow for the degree of flexibility in pricing referred to above, the industry level of protection would have to be set higher than would be indicated by the cost disadvantage at the plant level, including normal profits. Of necessity, pricing below the plant level of protection for one product, requires pricing above that level for another product. The present practice of Fiberglas Canada of pricing below the existing tariff in varying degrees for different products reflects the fact that the available protection exceeds that which is required on the basis of normal profits. The temptation, however, always exists to price up to the tariff and to rationalize production in favour of the most profitable items.

An "industry" approach also presents problems in that Fiberglas Canada produces continuous filament glass products only, while the tariff must also accommodate products produced by the staple fibre process. Moreover, while a single tariff item might be feasible at present with only one producer this could be inequitable following the entry of another producer in the future with a different process or product mix. It is self-evident that if it should be felt desirable to provide for differential treatment with respect to application or use that a commodity approach would be required for the nomenclature. Particular problems arise with respect to different products and applications; these can best be determined by a review of the current classification, of glass fibres and filaments.

Textile glass fibres currently enter under tariff item 56005-1. This item was established as a result of Tariff Board Reference No. 125 specifically for staple fibres of a length suitable for spinning. However, textile glass fibres, not exceeding 12 inches in length, may be produced either by a specific production technique known as the "staple fibre process" or from continuous filaments purposely cut to spinning lengths. From all information available to the Board, it would appear that production of glass staple fibre spun yarns is currently non-existent in Canada, and extremely limited on a world-wide basis. As a result, the trade in staple fibres of spinnable lengths for use in the manufacture of spun yarns would also be expected to be negligible.

Because the description of tariff item 56005-1 did not include a specific textile end-use provision, the item has also been held to cover "chopped strand" and "milled fibres," i.e., cut lengths of continuous glass filaments used as reinforcements of plastics, paper, etc. While some lengths of chopped strand would be of spinnable lengths, most chopped strand and all milled fibres are of a length and in a form unsuitable for spinning. Moreover, chopped strand and milled fibres represent a further stage of processing than staple fibres, and it may be argued that, on this basis, a difference in tariff treatment is warranted. This could be accomplished by two separate tariff items, or by

a single description with two divisions (and two rates), one restricted to fibres used in the manufacture of yarns and the other to fibres used for other purposes.

The second tariff item referred to the Board, 56010-1, refers to "sliver." Sliver is an intermediate step in the production of spun yarns. "Roving," as used in the textile industry, refers to "staple fibre roving" and is the intermediate step between sliver and spun yarn.<sup>(1)</sup> As has been discussed earlier in this study, there is no known trade in either textile glass sliver or staple fibre roving in Canada. Because both of these goods are primarily products of intermediate operations in a yarn-spinning plant, it would be feasible to group the sliver and roving together under one item.

Technically, all glass filament products begin as strand, which is the collection of glass filaments gathered together without twist; a single glass filament is too fine and fragile to be used alone. These strands may be twisted as in the case of yarns, used in a continuous form as in the production of rovings, chopped as in the manufacture of reinforcing mat or cut as in the production of chopped strand or staple fibres. Filament strand is currently imported under three tariff items: 56015-1, 56105-1 and 56110-1. Tariff item 56015-1, restricted to imports for use in the manufacture of yarn or flock, refers to "filaments," while the other two tariff items refer to "yarns and rovings." A glass filament roving contains two or more ends or its equivalent of untwisted strand and, as such, is much heavier than yarn and is easily distinguishable from it. The filaments entering under 56015-1 and the rovings under tariff items 56105-1 and 56110-1 are both untwisted and could readily be included under one classification.

Textile yarns, cords and similar products constitute a distinct product group within the textile glass fibre and filament industry. These products are covered under tariff items 56105-1, 56110-1, and 56117-1. Tariff item 56117-1 is a temporary item established in order to align the duty on glass tire cord with that on tire cord fabric and tires. Because glass yarns and cords fit into a specific classification and can, with few exceptions, be differentiated from other glass fibre and filament products and other materials, it would, therefore, be feasible to provide a separate nomenclature for these products in one or more items. Although yarns are mainly used in textile applications, it would be possible to distinguish as to the actual application in the nomenclature. One possibility would be to make permanent the temporary tariff classification for tire cord yarn.

Glass fibre or filament reinforcing mat refers to mat in any non-woven form made either from continuous filaments, or from fibres, deposited in a random formation. The requirement of randomness allows for differentiation from other non-woven glass fabrics produced by joining the yarns in a set pattern resembling woven textiles, and could provide a basis for a separate tariff item.

It, therefore, appears administratively feasible to establish a tariff schedule for textile glass fibres and filaments based on the following five categories or groups:

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(1) See Chapter I for definition.

1. Textile glass fibres, not exceeding fifteen inches in length, in bulk, including "chopped strand," "milled fibres," and fibres of a length suitable for the manufacture of spun yarn;
2. Textile glass fibres, not exceeding fifteen inches in length, which have been further processed, but not spun into yarn, including sliver and staple fibre roving;
3. Untwisted groups of continuous textile glass filaments;
4. Yarns of textile glass fibres and filaments, including threads, cords, or twine; and
5. Non-woven mat wholly of textile glass fibres or filaments deposited in a random formation.

The first category would encompass all textile glass fibres in bulk which had not been carded or combed or otherwise further processed. A limiting length of 15 inches, rather than 12 inches as in tariff item 56005-1, would be used to encompass the upper limit normally defined for glass staple fibre. The second category would include all the intermediate products between the bulk unprocessed staple fibres, in the first group, and spun yarn. All of these stages are normally done within the yarn-spinning plant.

All untwisted grouped filaments of fibreglass, such as roving and strand would be covered by the third classification. The products covered under this category consist of two or more continuous filaments grouped together, with the filaments substantially parallel and untwisted. They would not include filaments, that have been subjected to processes such as twisting and untwisting, false crimping and curling, which are usable as yarns. The fourth category encompasses yarns wholly or in chief value of textile glass fibres or filaments, with some twist. The final category refers to textile glass mat.

A new tariff schedule for glass fibres and filaments could be retained in Group X of Schedule "A" to the Customs Tariff. However, it would also be possible in certain instances to include items with specific end-use provisions in those Groups of the Customs Tariff containing the tariff items for the end-products referred to in the specific application.

#### RATES OF DUTY

Based on the current sources of Canadian imports of glass fibres and filaments, it is clear that the level of protection with respect to M.F.N. countries alone is significant. Therefore, the following discussion is limited to M.F.N. rates; the B.P. or Gen. rates are not discussed.

A major consideration in the determination of rates for fibreglass is the criteria to be used. Fibreglass users urged before the Board that the rates of duty on fibreglass should be lower than the



levels of protection in turn received by them. Fibreglass rates would, then in essence, be based on the rates of duty on woven glass fabrics and fibreglass reinforced plastic products. This would ensure what may be called the usual structure of the Canadian tariff.

However, a lower duty for the intermediate than for the end-product is not automatic, nor is its justification always self-evident. Whether or not lower fibreglass duties are warranted would depend on the amount of protection, in terms of higher Canadian prices, the user actually pays on fibreglass, its importance in his overall cost of production, the cost of protection on other material and non-material inputs, and the amount of protection received by the user on his output. A consideration of all those factors might well indicate a reduction in the level of protection of fibreglass materials. Should, however, rates, thus determined, be less than would be indicated by fibreglass production costs, then the viability of that production would be adversely affected. The alternative, as suggested by an interested party appearing before the Board, would be to raise the protection for fibreglass users; this was obviously not considered by the Board, being outside its terms of reference.

Duties for fibreglass could, alternatively, be established in line with the level of protection actually utilized by the Canadian producer. In the event that the existing protection is not fully utilized, the nominal tariff would, consequently, be reduced. This would appear to be a reasonable approach if, at those rates of duty, Canadian production were, or would potentially be, profitable. However, as is the case with Fiberglas Canada, the degree to which available protection is used varies from time to time and in some cases for some of its product results in unprofitable production. Therefore, to use the degree of tariff utilization as rate determinant would in such instances tend to lock in the unprofitable status and would discourage future expansion. Conversely, those products which would be very profitable to produce would be favoured in future expansion to the detriment of the other products.

The third alternative would be to set the rates of duty for glass fibres and filaments relative to the differentials in production costs, including a normal profit, that exist between the Canadian producer and its U.S. competitors. In this situation Fiberglas Canada could continue to produce all its current products at, what is today, a normal profit. However market conditions may, in the case of some products, not permit this level of protection to be fully utilized. These products would be sold below cost and, since these losses could not be offset by higher than normal profits on the remaining products, the overall operation might no longer be economically viable. Furthermore, a tariff, which provided, in the light of current circumstances, for a normal profit, might well result in what would be considered excessive profits in the future if demand for fibreglass should grow as anticipated, and as capacity utilization of the Canadian producer improved.

It appears from the preceding discussion that the use of any single criterion for determining rates of duty for glass fibres and filaments would present a number of problems.

There was a general proposal for the elimination of all duties applicable to the textile glass fibre and filament products included in this Reference. Free entry would improve the competitive position of domestic user industries such as boat-builders and would probably result in some increase in their output; however, as was pointed out in the previous chapter, fibreglass costs, particularly with respect to fibreglass reinforced products, are relatively small and consequently the benefits of free entry can easily be overstated. Further, as indicated by the Board's analysis of production cost differentials and profit margins, free entry for glass fibres and filaments would impair the economic viability of production of these products in Canada.

Fiberglas Canada proposed that the rates of duty applicable to imports of glass fibres, covered in tariff item 56005-1, be raised, but did not specify what the increase should be. The impact of an increase in the duty on chopped strand, from the present level of 10 p.c., would, in terms of higher Canadian prices, increase user costs, but this impact would not appear to be significant in terms of total factory costs. Similarly the benefit for users from a reduction in the tariff protection afforded this product would also be limited, but it could well make domestic production of this product uneconomical. A higher rate of duty for chopped strand would, however, serve to bring its level of protection more in line with that accorded other glass fibre and filament products which are processed to roughly the same level.

With respect to textile glass staple fibres for use in the manufacture of yarn, currently imported at 10 p.c. as well, any proposed change in rates would only affect users, inasmuch as this material is currently not produced in Canada. This would also apply to glass sliver and glass staple fibre roving; an increase in duty would only increase user cost.

With few exceptions, the representations and proposals presented to the Board called for a lowering in the rate of duty on roving from its current level of 10 p.c. plus 10 cents per pound, to a level below the rates applicable to reinforced plastics products. The majority of these proposals called for M.F.N. rates of 10 p.c. or less; this compared with the applicable ad valorem equivalent rate of 33.8 per cent, in effect in October 1975. Based on Canada-U.S. price differentials for roving during 1974-75, a reduction in the rate of duty to 25 p.c. would have no effect on any reinforced plastics producer using standard or spun roving and only a negligible effect on users of P-30 roving. Reducing the tariff on roving to 10 p.c. would, of course, lower user cost. However, the impact would not be great; in the case of three-quarters of the products surveyed total production costs would diminish by less than 2 per cent and for the remainder, by less than 5 per cent. At a 20 per cent rate of duty the impact on user costs was estimated to exceed 1 per cent in only a few cases; for all but one of the other products analyzed, the impact on factory costs was estimated to be less than 0.5 per cent. At a 17½ p.c. rate of duty for roving, the impact on user factory costs ranged from zero to 2 p.c.

A reduction to 25 p.c. would have affected the profits of Fiberglas Canada on rovings adversely, especially with respect to the high volume P-30 roving. The impact would, however, not be commensurate with the reduction inasmuch as the presently available tariff protection



was not fully utilized, particularly for standard roving. In the light of market conditions, costs and degree of plant utilization existing during 1974-75, any reduction in the level of protection below 25 p.c. would have had an adverse impact on all rovings. On the other hand, if, as anticipated, demand for fibreglass should increase and the Guelph plant were to operate closer to full capacity, then the viability of the textile glass operation could be maintained with a tariff of less than 25 p.c. on rovings.

The filaments imported under tariff item 56105-1 for use in the manufacture of yarns or flock are, like roving, grouped filaments which have not been twisted. To reduce the rate of duty on materials imported for these purposes from its present level of 10 p.c., or to increase it, would appear to be of little direct consequence since imports under this tariff item, and domestic production for these purposes, appear to be negligible. Eliminating the present end-use provision would mean that these filaments would be classified along with and at the same rate as other rovings.

Yarns, except for tire cord yarn, enter under tariff items 56105-1 and 56110-1 at identical M.F.N. rates, 10 p.c. plus 10 cents per pound.<sup>(1)</sup> From the viewpoint of current rates of duty, there is no reason therefore why these two tariff items could not be combined. Moreover, the Board did not obtain any information on production cost differentials that would indicate separate tariff treatment.

There were no representations made to the Board concerning the tariff on glass yarns. In the Board's survey of textile manufacturers, the opinion was expressed that the current tariff was reasonable and should be retained. However, as has been shown in Chapter IV, the level of protection available appears to bear little relationship to the prices actually charged by Fiberglas Canada. In the majority of cases, reducing the tariff on fibreglass yarns to any level above 10 p.c. would have little or no impact on users. The main reason for the relatively low prices of fibreglass yarn appears to be the current state of the Canadian textile industry; market conditions would not permit the absorption of higher input prices. However, a rate of duty above 10 p.c. but lower than the current level, would appear more appropriate from the viewpoint of production costs. Even though this level of protection might not be immediately utilized, the Canadian producer would have the opportunity to produce glass yarns on a financially self-sustaining basis in the future.

It can be argued that tire cord yarn, even though it currently receives preferential tariff treatment, by way of an end-use provision under 56117-1, could be included with other yarns and at the same rate. That could be dependent on whether the rate recommended for other yarns would involve an increase or decrease from the present rate of 5 p.c. plus 10 cents per pound for tire cord yarns; an ad valorem equivalent rate of 18.1 per cent in 1974. The recommendation of the Rubber Association was that the levels of duty applicable to temporary tariff item 56117-1 be reduced to 12.5 p.c. or 11 cents per pound, as in 56115-1, or 12.5 p.c. as in 56235-1. (The recommendation was also meant to apply to 56237-1, woven tire cord fabric; this item was not specifically included in the Reference.)

(1) The only difference in rates of duty between tariff items 56105-1 and 56110-1 is in the B.P. rate, which is  $2\frac{1}{2}$  percentage points higher under tariff item 56110-1.

The proposed level of protection for glass tire cord yarn would, in terms of nominal levels of protection, put this product on the same basis, as far as users are concerned, as tire cord made from other synthetic fibres. From the viewpoint of the producer, there would be adverse effects if comparisons were based on the degree of tariff utilization in 1974; but based on 1975 experience, neither the producer nor the users of Canadian-made tire cord would be greatly affected. As previously noted, users of imported tire cord would benefit.

The final category covers glass fibre reinforcing mat. Representations and proposals submitted to the Board requested that mat be accorded the same tariff rate as proposed for roving, namely 10 p.c. or less. This would be a sharp reduction from the present rate of 25 p.c. Such a reduction would lower user costs, but not significantly; in fact the reduction would be less than 1 per cent primarily because mat, in 1974, was not priced up to the full level of tariff protection available. However, a 10 p.c. rate, even though the existing tariff is not fully utilized, would impair the viability of Canadian production.

CHAPTER VI: CONCLUSIONS AND RECOMMENDATIONS

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## CHAPTER VI: CONCLUSIONS AND RECOMMENDATIONS

This chapter is presented in three sections: the first section summarizes the Board's findings based on the analyses carried out in the preceding chapters; the second section presents the Board's conclusions and recommendations; the third section sets out the recommended tariff structure, nomenclature and rates. As already noted, the Board's conclusions and recommendations are based not only on the most recent public data and information available at the time of writing, but also on information obtained in confidence by the Board in accordance with the Tariff Board Act.

### SUMMARY OF FINDINGS

Glass fibres and filaments were first used, like man-made or other synthetic fibres, such as nylon, in the textile industry. It has, nonetheless been the development and exploitation of new non-textile applications, such as plastic reinforcement, which have brought about the dramatic expansion in Canadian and world production of fibreglass during the past two decades. Growth of this market has not been smooth, however, because it is particularly sensitive to cyclical fluctuations in general economic conditions. Moreover, the rate of growth has moderated from earlier levels as the industry matured. Nevertheless, the general picture that emerges is of a healthy industry that is likely to continue to enjoy an expanding market for some years to come.

Fiberglas Canada Limited, the sole domestic producer of textile glass fibres and filaments, has increased production at its Guelph plant in line with the growth of the Canadian market. The company imports a number of products for resale, which, because of the volumes involved, do not warrant domestic production. Furthermore, some glass fibres and filaments are imported by Canadian users which Fiberglas Canada cannot supply from domestic or foreign sources. Overall, the Board found that total imports accounted only for some 13 per cent of the domestic market for glass fibres and filaments and that the Canadian producer provided the bulk of the domestic requirements for these materials.

The Board found no evidence indicating that the unique position of Fiberglas Canada as the sole Canadian producer of textile glass fibres and filaments was the result of the inability of other producers to locate plants in Canada due to patent or technology restrictions. Rather, it would appear that it is the small size of the Canadian market, relative to that in the United States, that has made other producers decide not to invest in this highly capital-intensive industry.

It is evident, moreover, that Fiberglas Canada faces higher production costs than U.S. producers. Evidence indicates that it is largely the lack of specialization and consequent short production runs, arising out of the need to provide a broader product range out of a single plant than do U.S. producers, and not scale or overall capacity, that results in a less efficient use of capital and labour. This basic disadvantage for the Canadian producer has been aggravated in recent years by the emergence of higher wage rates. However, the



Board is of the opinion that the anticipated growth of the Canadian market for glass fibres and filaments will lead to improvements in plant efficiency and overall labour productivity in the future.

The Board found that the extent of the overall cost disadvantage of the Canadian producer was less than the level of protection provided by the present tariff. Moreover, an examination of Canadian-U.S. price differences for fibreglass materials indicates that Fiberglas Canada does not price up to the full extent of the presently available protection. The profits realized by Fiberglas Canada on its textile glass operations appear to be normal compared with similar operations in the United States and with other manufacturing industries. Although the company has a unique position as the sole producer of textile glass fibres and filaments, it is unable to price its products fully up to the tariff because the competitive position of the users of fibreglass has, apparently, not permitted this. Producing what are essentially intermediate goods, Fiberglas Canada must necessarily set its prices at levels which allow users to remain competitive. It is evident, therefore, that domestic fibreglass users have paid less for these materials than would be indicated by the duty. Consequently, the Board concludes that the price of fibreglass in Canada, while higher than in the United States, has not resulted in disadvantages to users of the magnitudes often claimed. Fibreglass prices are indeed higher, but, given the tariff protection afforded the finished products, there is no reason to believe that the domestic cost of glass fibres and filaments has had an inhibiting effect on the development of user industries.

#### MAIN CONCLUSIONS AND RECOMMENDATIONS

In view of the above factors and considerations the Board concludes that for most of the glass fibres and filaments included in this study the nominal level of protection can be reduced. Reductions in the level of protection in line with the current cost disadvantage of the Canadian producer are recommended to take effect immediately. The Board recommends, however, that further reductions be implemented in stages with final tariff adjustment not to take place for two years. Moreover, the Board has decided to make its recommendations in terms of specific commodities or groups of commodities and not on the basis of a broad industry approach. In this manner recognition can be given to differences with respect to trade, end-use, domestic production and production costs.

The recommendations are essentially discussed in terms of recommended M.F.N. rates, the only ones of major significance. It has not been necessary for the Board to give extensive consideration to B.P. and Gen. rates. The former have been left unchanged except when they are higher than the proposed M.F.N. rates; in these cases it is proposed that the two rates be the same. The General rates are also unchanged except where compound rates have been replaced by ad valorem rates.

No change in the rates of duty applicable to textile glass fibres in the form of chopped strand, milled fibres, or glass staple fibres for use as a reinforcement material is recommended. An increase in the applicable rates of duty would not serve to expand an

already limited user market. Any lower rate of duty would not be expected to lower the production costs of the user industries by any significant percentage, while the cost-price relationship for chopped strand indicates that the existing tariff is required at this time.

The Board recognizes that the Canadian producer does not manufacture the glass staple fibres used in the production of yarns, nor is any Canadian producer likely to do so. It is therefore recommended that glass staple fibres "for use in the manufacture of textile yarns" be granted free entry.

Further processed textile glass staple fibres, either in the form of sliver or staple fibre roving, are not known to be traded in Canada. Moreover, any imports into Canada of these products, which are intermediate steps in the production of spun yarn, are unlikely to provide significant competition to domestic production. The Board therefore recommends that imports of further processed textile glass staple fibres "for use in the manufacture of textile yarns" be granted free entry as well.

Untwisted grouped continuous glass filaments, known as roving and strand, account for a larger share of Fiberglas Canada's production than any other product line. In the opinion of the Board the tariff on these fiberglass materials, can, on the basis of current production cost and prices, be reduced to a level of  $22\frac{1}{2}$  p.c. This reduction would essentially be neutral, affecting neither users nor the producer greatly. It is further concluded that, given time to adjust, the domestic producer could be competitive at a rate of  $17\frac{1}{2}$  p.c. This final rate would also be more in line with the level of protection received by the users of roving and strand. It is, therefore, recommended that the M.F.N. rate of duty for untwisted grouped filaments be immediately lowered to  $22\frac{1}{2}$  p.c. It is also recommended that this rate be reduced by a further  $2\frac{1}{2}$  percentage points per year, until it is  $17\frac{1}{2}$  p.c. With respect to the B.P. rate, it is recommended that it be set at 20 p.c. until the Most-Favoured-Nation Tariff reaches that level, after which they should be the same. A Gen. rate of 50 p.c. is recommended. The Board recommends, furthermore, that glass filaments for conversion into (staple) fibres for use in the manufacture of textile yarns or flock, presently classified separately under tariff item 56015-1, be included with rovings and other untwisted grouped filaments at the same rates of duty.

On the basis of production costs and its price relationship to roving, the Board concludes that a final level of protection of  $17\frac{1}{2}$  p.c. would also be possible for glass reinforcing mat. This reduction should also be implemented in stages. It is therefore recommended that the M.F.N. rate for glass mat be 20 p.c., effective immediately. It is further recommended that the M.F.N. rate be lowered by an additional  $2\frac{1}{2}$  percentage points to  $17\frac{1}{2}$  p.c., the following year. It is also recommended that the B.P. rate remain at 20 p.c. the first year and then also be lowered to  $17\frac{1}{2}$  p.c. The Gen. rate of 50 p.c. should remain unchanged.

Evidence brought before the Board indicates that the rate of duty on glass yarns can also be reduced. Indeed, in considering the present level of tariff utilization, it could be lowered greatly with no immediate effect. However, the Board is of the opinion that

it would be appropriate to provide yarns with a level of protection similar to the other fibreglass materials, and in line with their production costs. Therefore, it recommends the same rates of duty under all tariffs for glass yarns as for untwisted grouped filaments such as roving, with similar implementation. For glass tire cord, it is recommended that it continue to be classified separately, at a M.F.N. rate of 12½ p.c.

The Board's recommendations as to nomenclature and rates are embodied in the recommended tariff changes. In formulating its recommendations, the Board has had to bear in mind that the items it considered covered not only goods within its terms of reference but also other goods, and that it must ensure that these other goods continue to be provided for without changes in rates of duty. With the exception of the temporary tariff item 56117-1, none of the tariff items referred to the Board deals exclusively with glass fibres and filaments. In order to establish a tariff structure that will deal specifically with the products under review the Board has found it necessary to delete the reference to glass fibres and filaments from a number of the referred tariff items and to recommend new tariff items for these products.

#### THE BOARD'S RECOMMENDATIONS

The Board recommends:

1. That Schedule "A" to the Customs Tariff be amended by deleting therefrom tariff items 56005-1, 56010-1, 56015-1, 56105-1, and 56110-1.
2. That the Customs Duties Reductions Regulations (P.C. 1971-1402, as amended) be further amended by deleting therefrom tariff item 56117-1.
3. That the following headings, enumerations of goods and rates of duty, together with appropriate tariff item numbers be inserted in Group X of Schedule "A" to the Customs Tariff:

	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
Textile glass fibres, including chopped strand and milled fibres, not exceeding 15 inches in length, not carded, not combed and not otherwise processed:			
I For use in the manufacture of textile yarns .....	Free	Free	Free
II N.o.p. ....	5 p.c.	10 p.c.	15 p.c.

		<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
III	Textile glass fibres, not exceeding 15 inches in length, which have been carded, combed, or otherwise processed, but not spun, for use in the manufacture of textile yarns .....	Free	Free	Free
IV	Grouped filaments, wholly of glass, consisting of two or more continuous filaments grouped together, with the filaments substantially parallel and untwisted ....	20 p.c.	22½ p.c.	50 p.c.
	On and after (one year after first effective date) .....	20 p.c.	20 p.c.	50 p.c.
	On and after (two years after first effective date) ....	17½ p.c.	17½ p.c.	50 p.c.
V	Yarns, wholly or in chief value of glass fibres or filaments, with some twist, including threads, cords and twines, not containing wool or hair .....	20 p.c.	22½ p.c.	50 p.c.
	On and after (one year after first effective date) ....	20 p.c.	20 p.c.	50 p.c.
	On and after (two years after first effective date) ....	17½ p.c.	17½ p.c.	50 p.c.
VI	Yarns, wholly of glass filaments, for use in the manufacture of woven tire fabrics .....	12½ p.c.	12½ p.c.	45 p.c.
VII	Non-woven mat, wholly of textile glass fibres or filaments .....	20 p.c.	20 p.c.	50 p.c.
	On and after (one year after first effective date) ....	17½ p.c.	17½ p.c.	50 p.c.
VIII	Man-made fibres not exceeding 12 inches in length .....	5 p.c.	10 p.c.	15 p.c.

		<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
IX	Sliver, wholly or in part of man-made fibres .....	5 p.c.	10 p.c.	15 p.c.
X	Man-made filaments imported for converting into lengths not exceeding 12 inches for use in the manufacture of textile yarns or flock ....	5 p.c.	10 p.c.	15 p.c.
XI	Yarns and rovings, wholly of man-made fibres or fila- ments, not more advanced than singles, not coloured, with not more than seven turns to the inch .....	20 p.c.	10 p.c.	35 p.c.
	and per pound		10 cts.	20 cts.
XII	Yarns and rovings, wholly or in part of man-made fibres or filaments, including threads, cords or twines, not containing wool or hair	22½ p.c.	10 p.c.	35 p.c.
	and per pound		10 cts.	20 cts.

First Vice-Chairman

Member

Member







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FN 55  
-77R5211



Report by

**THE TARIFF BOARD**

Pursuant to the Inquiry Ordered  
by the Minister of Finance  
respecting

**FRESH AND PROCESSED FRUITS  
AND VEGETABLES**

Volume 1 Part I

**SUMMARY AND  
RECOMMENDATIONS:  
FRESH FRUITS AND VEGETABLES**

***Reference No. 152***







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Volume 1 Part I

SUMMARY AND  
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*Reference No. 152*

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\* Messrs. L.E. Couillard, former Chairman of the Board and W.T. Dauphinee, Second Vice-Chairman, originally members of the panel for this inquiry, retired in December 1975 and August 1975 respectively.



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The Honourable Donald Macdonald, M.P., P.C.  
Minister of Finance  
Ottawa

Dear Mr. Macdonald:

I refer to the Honourable John Turner's letter of July 6, 1973, addressed to Mr. L.E. Couillard, former Chairman of the Tariff Board, directing the Tariff Board to make a study and report on specified tariff items in so far as they relate to fresh and processed fruits and vegetables.

I now have the honour to transmit Volume 1, Part I of the Report of the Board, in English and in French, signed by them on March 2, 1977. This part contains the summary and recommendations for fresh vegetables and fruits. Volume 1, Part II will contain the individual commodity reports on which the revised tariff schedule is based. Volume 2 will be devoted to processed fruits and vegetables. These volumes will be forwarded to you as soon as they have been completed.

A copy of the transcript of the proceedings at the public sittings accompanies this first part of the report.

Yours sincerely

A handwritten signature in dark ink, reading "Pamela M. McInnes". The signature is fluid and cursive, with the first name "Pamela" and the middle initial "M." being more prominent.

Chairman

Explanation of Symbols Used

- Denotes zero or none reported
  - .. Indicates that figures are not available
  - \* Indicates a reported figure which disappears on rounding, or is negligible
- 

The sum of the figures in a table may differ from the total, owing to rounding.

The record of the proceedings of the public sittings held by the Board on this Reference is referred to as the Transcript.

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LETTER OF REFERENCE

Ottawa, Ontario,  
K1A 0G5,  
July 6, 1973.

Mr. L.E. Couillard,  
Chairman,  
Tariff Board,  
219 Argyle Avenue,  
Ottawa, Ontario,  
K1A 0G7.

Dear Mr. Couillard:

My Colleagues and I have concluded that a number of developments in recent years have made many of the present tariff provisions for fresh and processed fruits and vegetables inadequate and out of date.

As a result of rising prices, the specific rates of duty applicable to many of these products have been affording growers and processors a diminishing level of protection against imports. The greenhouse industry has become a more important factor in the Canadian market, particularly for tomatoes and cucumbers. Greenhouse and field crops reach the market at different times of the year and it is claimed that the present tariff structure cannot provide sufficient protection for both crops.

Moreover, in some years, there have been periodic imports or the threat of imports of certain fruits and vegetables at very low or distress prices while at other times certain domestic products have been in short supply. The present tariff is not structured to deal adequately with either of these situations.

I believe it would be useful if the Tariff Board were to examine the impact of the present tariff structure on the fruit and vegetable growing and processing industries taking into account the general interests of Canadians as consumers and the importance of these products in the budgets of Canadian families. I would expect the Board to include in its report a detailed assessment of other factors affecting the production, consumption, marketing, and international trade in the products of these industries. It should also consider and report on how, in its view, provision could be made for action to be initiated quickly to either counter the adverse effects of low-priced imports or the threat of low-priced imports on Canadian growers and processors or to benefit consumers at times when domestic products are in short supply.

I, therefore, direct the Tariff Board to make a study and report under section 4(2) of the Tariff Board Act on the following tariff items insofar as they relate to fresh and processed fruits and vegetables:

LETTER OF REFERENCE (concl.)

8305-1	8721-1	9032-1	10525-1
8310-1	8722-1	9035-1	10525-2
8315-1	8723-1	9040-1	10525-3
8320-1	8724-1	9045-1	10530-1
8400-1	8725-1	9100-1	10535-1
8500-1	8726-1	9201-1	10550-1
8505-1	8727-1	9202-1	10555-1
8507-1	8728-1	9203-1	10601-1
8701-1	8729-1	9204-1	10602-1
8702-1	8730-1	9205-1	10603-1
8703-1	8731-1	9206-1	10604-1
8704-1	8901-1	9207-1	10605-1
8705-1	8902-1	9208-1	10606-1
8706-1	8903-1	9210-1	10607-1
8707-1	8904-1	9211-1	10608-1
8708-1	8905-1	9212-1	10701-1
8709-1	8905-2	9300-1	10702-1
8710-1	8906-1	9401-1	10703-1
8711-1	9001-1	9402-1	10704-1
8712-1	9002-1	9500-1	14800-1
8713-1	9003-1	9505-1	14900-1
8714-1	9004-1	9600-1	15202-1
8715-1	9010-1	9905-1	15205-1
8716-1	9015-1	9910-1	15206-1
8717-1	9020-1	9945-1	15207-1
8718-1	9021-1	10405-1	15208-1
8719-1	9025-1	10500-1	15215-1
8720-1	9030-1	10520-1	15305-1

The Board should include in its review such other tariff items it may consider relevant to its study.

Your Board will note that the list of tariff items includes items covering products which are imported in semi-processed condition to be further manufactured for the consumer market in Canada. Canadian processors represented that this further manufacturing is vital in maintaining their over-all operations at an efficient level.

If the Board should find that amendments to the Customs Tariff are desirable, I would request that it prepare a revised schedule of tariff items with recommendations as to appropriate tariff descriptions and rates of duty, and recommendations as to the tariff structure or other arrangements as will, in the Board's view, deal effectively with the problems of low-priced imports or the threat of low-priced imports or of products in short supply.

I would ask the Board to submit its report on this reference as soon as may be consistent with a thorough examination of these matters.

Yours sincerely,

John N. Turner

## CHAPTER I: INTRODUCTION

### ORGANIZATION OF THE REPORT

This is the first of two volumes of the report by the Tariff Board on Reference No. 152 - Fresh and Processed Fruits and Vegetables. The Reference covers 118 tariff items and many more individual commodities and products. Because of its scope and the lengthy time required to collect the relevant data and to investigate the various items, the Board has chosen to submit its report on this Reference in several stages. This procedure permits the Board to submit its findings and recommendations to the Minister of Finance on particular segments of the study in advance of the completion of all research and deliberation required for the total project. It is hoped thereby to lessen the risk that the data relating to certain parts of the report would be out of date when submitted.

The first volume deals with the tariff items pertaining to fresh fruits and vegetables and will appear in two parts. Part I presents the Board's recommendations with respect to the tariff schedule for these commodities. The evidence, findings and tariff considerations on which those recommendations are based will be published separately in Part II of this first volume in the form of 49 individual commodity reports on the major fresh vegetables and fruits. The Board reports also in Part I on its considerations of a number of the major issues with respect to protection of the Canadian horticultural industry. Of these, the Board's conclusions and recommendations with respect to measures to counter distress-priced imports are the most important. Volume 2 of the report will deal with the tariff items referred to the Board pertaining to processed fruit and vegetable products.

### TERMS OF REFERENCE

In his letter of reference to the Board,<sup>(1)</sup> the Minister of Finance stated that a number of developments in recent years had made many of the present tariff provisions for fresh and processed fruits and vegetables inadequate and out of date. Specific mention was made of the diminishing level of protection against imports provided by specific rates of duty on many products as a result of rising prices and of the inadequacy of the present tariff structure to deal with periodic imports or the threat of imports at distress prices, on the one hand, and periodic shortages of domestically produced products, on the other. The Minister also noted the increased importance of the greenhouse industry and referred to the alleged inadequacy of the present tariff structure to provide appropriate protection to both greenhouse and field crops, given their different production and marketing seasons. The Board was asked to make a thorough study of the relevant tariff and non-tariff issues and to make appropriate recommendations on the basis of this detailed assessment of the various factors affecting the products and industries concerned. Certain temporary reductions in the statutory rates for fruits and vegetables have been introduced by the Minister of Finance in recent

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(1) The full text of the letter of reference is given supra, pp. xi, xii.

years and some of these reductions are currently in effect. The Board has based its tariff considerations on the permanent statutory rates and its recommendations relate to those permanent rates.

### THE PUBLIC SITTINGS, PROPOSALS AND BRIEFS

The public sittings relative to this Reference were held in the Government Conference Centre in Ottawa on January 29 to February 15, 1974. In advance of the sittings, members of the fruit and vegetable growing and processing industries and other interested persons were invited to submit proposals concerning the wording and the rates of duty of the relevant tariff items and the recommendations the Board should make to the Minister. Briefs containing relevant facts, opinions and arguments in support of those views were also invited. Copies of proposals and briefs were circulated to interested parties and were available on request. The major tariff and other proposals made to the Board with respect to fresh fruits and vegetables are summarized in Chapter III.

Written submissions for consideration at the public sittings were received from:

- Australian Apple and Pear Board, Melbourne, Australia
- \* Australian Canned Fruits Board, Melbourne, Australia
- \* California Grape & Tree Fruit League, San Francisco, Calif., U.S.A.
- \* The Canada Starch Company Limited, Montreal, Que.
- \* Canadian Cannors Limited, Hamilton, Ont.
- Canadian Federation of Agriculture, Ottawa, Ont.
- \* Canadian Food Processors Association, Ottawa, Ont.
- \* Canadian Fruit Wholesalers' Association
- \* Canadian Horticultural Council, The, Ottawa, Ont.
- \* Canadian Importers Association Inc., Toronto, Ont.
- \* Canadian Mushroom Growers Association
- \* Canadian Wine Institute
- Chambers, McKelvie & Associates Ltd., Edmonton, Alta.
- \* Coca-Cola Ltd., Toronto, Ont.
- \* Consumers' Association of Canada, Ottawa, Ont.
- Florida Cannors Association, Winter Haven, Fla., U.S.A.
- \* Florida Citrus Commission, Lakeland, Fla., U.S.A.
- \* Libby, McNeill & Libby of Canada Ltd., Don Mills, Ont.
- \* Minute Maid Corporation (Canada) Ltd., Toronto, Ont.
- \* National Farmers Union
- Northwest Horticultural Council, Yakima, Wash., U.S.A.
- \* Ontario Greenhouse Vegetable Producers Association, Leamington, Ont.
- Powell Foods (1973) Limited, St. Catharines, Ont.
- \* Quebec, Province of, Department of Industry & Commerce
- \* Quebec Wine Producers Association
- Suncrest Growers Inc., Menlo Park, Calif., U.S.A.
- Sunkist Growers Inc., U.S.A.
- Sunland Marketing Inc., Menlo Park, Calif., U.S.A.

- \* Taiwan Mushroom Packers United Export Association,  
Taipei, Taiwan
- \* Thomas J. Lipton Limited, Toronto, Ont.  
Valley Co-operative Ltd., Grand Falls, N.B.

\* Represented at the public sittings.

Subsequent to the public sittings, further written representations were received from some of the above. In addition, written representations were received from:

Atlantic Fresh Produce Association  
B.C. Tree Fruits Limited, Kelowna, B.C.  
Kirkland & Ross Ltd., Vancouver, B.C.  
National Association of Greenhouse Vegetable  
Growers, Washington, D.C., U.S.A.  
New Brunswick, Government of, Department of  
Agriculture and Rural Development  
New Brunswick, Government of, Department of  
Economic Growth  
Newfoundland, Government of, Department of  
Forestry and Agriculture  
Nova Scotia Fruit Growers' Association  
Scotian Gold Co-operative Limited, Kentville, N.S.

There were also present, at the public sittings, representatives of a number of other firms, associations and governmental agencies, many of whom participated in the discussions. Among those represented were:

Australian High Commission, Ottawa, Ont.  
B.C. Coast Vegetable Marketing Board  
B.C. Fruit Growers' Association  
British High Commission, Ottawa, Ont.  
Canada, Government of, Department of Agriculture  
Canada, Government of, Department of Consumer &  
Corporate Affairs  
Canada, Government of, Department of Industry,  
Trade & Commerce  
Canada, Government of, Department of National  
Revenue, Customs & Excise  
Canada, Government of, Food Prices Review Board  
Canadian Broadcasting Corporation  
Canadian Manufacturers' Association, Toronto, Ont.  
Canadian Press, Ottawa, Ont.  
Catelli Foods Ltd., Montreal, Que.  
Country Guide  
Embassy of the United States  
Florida, State of, Department of Citrus  
Irish Export Board  
Metcalf Foods of Canada Limited, Deseronto, Ont.  
New Brunswick Federation of Agriculture



New Zealand High Commission  
 Ontario Asparagus Board  
 Ontario Federation of Agriculture  
 Ontario Food Council  
 Ontario Grape Marketing Board  
 Ontario Tender Fruit Growers' Marketing Board  
 Provincial Food Brokers (1971) Ltd.  
 South African Embassy  
 Sunny Orange Canada (1966) Ltd., Toronto, Ont.  
 U.S. Department of Agriculture  
 Les Vins Chantecler Limitée, Montreal, Que.

#### SOURCES OF STATISTICAL AND OTHER INFORMATION

Valuable information relating to the development, problems and cultural practices of the horticultural industry was obtained from the briefs submitted to the Board and from evidence given at the public sittings. In order to sharpen their perspective and broaden their technical knowledge of the industry, members of the Board visited some of the major vegetable-producing and fruit-growing areas in Canada, including the L'Assomption district in Quebec, the Bradford and Keswick Marshes to the north of Toronto, the Eriau Marsh in Essex County, the Saint John Valley in New Brunswick, Prince Edward Island, and the Lower Fraser Valley and the Okanagan Valley in British Columbia. The Board viewed the operations of a number of individual growers of representative horticultural products across the country and also visited the Ontario Food Terminal as well as several of the "packing" houses which wash, grade and pack fruit and vegetables for the retail and export markets.

While a number of departments and agencies, federal and provincial, collect data on one or another aspect of commercial trade in fresh fruits and vegetables, much of this data is unpublished and available only from worksheets at various locations in Canada. The information is often not comparable with respect to time period covered, geographical coverage, definition, and level of trade. The first task of the Board, therefore, was to embark on a time-consuming task of gathering, correlating and assessing a massive quantity of information on each fresh fruit and vegetable. In this connection the Board is of the opinion that both industry and governments would benefit from greater coordination of this data gathering activity amongst the various departments and agencies involved.

The most complete information respecting the structure of the horticultural industry in Canada is contained in reports compiled in connection with the census of agriculture. Census information was, however, of limited use for this study because the most recent census was taken in 1971 with some of the data referring to 1970. The 1971 Census of Agriculture did provide information on the number, size and geographical distribution of farms reporting the production of fruits and vegetables. While farms cannot be equated precisely with farmers, the degree of correspondence is believed to be fairly high. The 1971 Census also reported the number of trees, by age group, for the more important tree fruits grown in Canada. Neither the census nor any

other source provided any information on the number of full and part-time workers employed by Canadian fruit and vegetable growers and the Board was therefore unable to estimate the total labour force engaged in horticulture.

Annual statistics on Canadian acreage, production and farm value - and, hence, implicitly on yield per acre and average farm value per pound - are published by Statistics Canada in Fruit and Vegetable Crop Reports (Catalogue No. 22-003). At the time of writing, these statistics were available for 25 fruits and vegetables covering close to 95 per cent of Canadian production. Estimates of the production of some of the other vegetables produced in Canada (e.g., radishes) were provided to the Board by Agriculture Canada. Provincial agricultural agencies, particularly in Ontario and British Columbia, were a source of production data pertaining to their respective provinces. The Handbook of Agricultural Statistics, Part 1: Field Crops (Catalogue No. 21-507) and the Quarterly Bulletin of Agricultural Statistics (Catalogue No. 21-003), both published by Statistics Canada, were also used as sources of production data. Statistics relating to the cultivation of vegetables in greenhouses, in contrast to field production, were obtained from the Statistics Canada publication, Greenhouse Industry (Catalogue No. 22-202).

In many instances, a detailed provincial breakdown of the principal statistics of acreage, production and farm value was precluded because of the confidential nature of the data. The published statistics pertaining to the Atlantic Provinces, Saskatchewan and Alberta were found to be especially affected by this limitation, often being available only as regional aggregates, sometimes embracing more than one region. Thus, on occasion data for the Prairie Provinces were combined with the regional totals for the Atlantic Provinces.

Published production data refer to marketed or commercial production only. Vegetables and fruits grown either on farms or elsewhere for home consumption are not included. Hence, the production figures used in this report under-estimate total production. Whenever acreage is reported, reference is made to planted acreage; the exceptions are snap beans for processing, corn, peas and tomatoes, for which harvested acreage is reported. Acreage in the United States is normally reported on a harvested basis. A comparison of yields per acre between Canada and the United States would therefore in most cases tend to favour the United States. The difference would not be great except in the event of very adverse growing or harvesting conditions.

The Board estimated the monthly distribution of domestic production for the fresh market on the basis of the month-by-month pattern of unloads of domestic produce on the 12 principal wholesale markets<sup>(1)</sup> covered by Agriculture Canada in its Annual Unload Report, Fresh Fruits and Vegetables. In so doing, the Board assumed that the monthly distribution of unloads for the fresh market, which represents the bulk, but not all, of fresh market production for most fruits and vegetables, is the same as that for total domestic fresh

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(1) These are Halifax, St. John, Quebec, Montreal, Ottawa, Toronto, Winnipeg, Regina, Saskatoon, Edmonton, Calgary, and Vancouver.

market production; there is no proof that this is indeed so, but it is believed that the two are very similar. The monthly flow of fresh vegetables for processing could be estimated only very approximately, because unloads data refer exclusively to fresh market produce.

Most fruits and vegetables are grown for processing as well as for fresh market consumption. Statistics Canada publishes a breakdown between the two uses with respect to acreage, production and farm value for most of the fruits but for only three vegetables - corn, tomatoes and beans. Where such information was unavailable, production for processing has generally been taken to be equal to the volume of the vegetable, or fruit, purchased by Canadian processors from Canadian growers. Data on domestic purchases are published by Statistics Canada in Fruit and Vegetable Preservation Service Bulletin (Catalogue No. 32-023). When, for reasons of confidentiality, domestic acquisitions data have not been available, an estimate of production for processing has been based in most instances on total processor acquisitions, including imported produce, as published annually by Statistics Canada in Fruit and Vegetable Processing Industries (Catalogue No. 32-218). Where in the case of some vegetables this approach proved to be unsatisfactory, the Board obtained information directly from individual processors.

Special arrangements were made to obtain information on the structure of the vegetable growing industry in the Bradford Marsh area and on the production and marketing of tomatoes, cucumbers and strawberries in Mexico. Data pertaining to the United States fruit and vegetable-growing industry were taken from published statistics for that country, primarily Agricultural Statistics, put out by the United States Department of Agriculture. Information relating to the economic and technical aspects of growing the major fruits and vegetables in producing areas in Canada and the United States was obtained from various farm management sources. Information concerning the cost of packing vegetables in consumer packs was supplied to the Board by a number of firms engaged in this line of activity.

Data on exports and imports were obtained, wherever possible, from the regular publications of Statistics Canada dealing with external trade (especially Catalogue Nos. 65-202 and 65-203). Published trade statistics could be used wherever the commodity description coincided with the tariff item description; for imports this was frequent, but for exports, it was rare. Where there was not a commodity description identical to the tariff item, imports were derived from unpublished computer printouts of Statistics Canada in which imports were broken down under a commodity class by tariff item.

Many relatively minor, but not insignificant, fruits and vegetables enter under "basket" tariff items, such as tariff item 8731-1: "Fresh vegetables, n.o.p." In order to obtain an indication of the characteristics of the various vegetables imported under such items, the Board examined the original import documentation over a two-month sample period. Another source of import information was the information on unloads at 12 principal domestic markets, which also covers and specifies unloads of imported produce; this source



also provided an estimate of the internal geographical distribution of imported produce.

Published statistics on imports of fresh fruits and vegetables combine shipments for both the fresh market and for processing. Imports for processing were estimated by the Board on the basis of acquisitions of imported produce by Canadian processors as contained in the aforementioned Fruit and Vegetable Preservation Service Bulletin or supplied by individual processors. The conversion ratios used to arrive at the fresh equivalent weight of imports of processed vegetables and processed fruits were supplied to the Board by Agriculture Canada.

The published data of Statistics Canada on exports of fresh fruits and vegetables were supplemented by U.S. statistics on imports from Canada contained in U.S. Imports for Consumption, T.S.U.S.A., Commodity and Country of Origin, United States Department of Commerce, and by figures of unloads of Canadian fresh vegetables and fruits on principal markets in the United States, published in Fresh Fruit and Vegetable Unload Totals, United States Department of Agriculture.

Information on prices received by growers of fresh fruits and vegetables for the fresh market is practically non-existent. Average farm value per pound, calculated by the Board on the basis of the production and total farm value published by Statistics Canada, is available for 16 vegetables and nine fruits. However, for most of these vegetables, and some of the fruits, this value is a combination of the price received for produce grown for processing as well as produce grown for the fresh market. Average farm values for both processing production and fresh market production could be calculated for all the major fruits but for only three vegetables; corn, tomatoes and beans. For some processing vegetables, the Board was provided with prices established by contract between the grower and the processor.

Weekly wholesale-to-retail price data for 1974 pertaining to the principal packs and grades of most of the fruits and vegetables treated in this study were compiled by the Board for five major Canadian markets, i.e., Halifax, Montreal, Toronto, Winnipeg, and Vancouver, from unpublished documents provided by Agriculture Canada. Statistics relating to the landed cost of the main vegetables imported into these five market centres - broken down into f.o.b. cost, freight and brokerage charges and duty paid - were compiled by the Board on a sample basis from the records of individual wholesalers; such information was not collected for fresh fruits. In the case of Toronto, all these price and cost data were collected for the years 1972, 1973, and 1974 while, due to time constraints, data in respect of the other four centres were obtained for 1974 only. Unit import values for Canada as a whole were calculated from the trade statistics for the years 1968 to 1975 inclusive.

The Board arranged for the collection of information pertaining to the cost of producing fresh vegetables and fresh fruits, for both processing and the fresh market, in Canada and the United States. Costs of production per acre and/or per pound were calculated on the basis of this data for a large number of vegetables and fruits in one or more major producing areas.

The Board considered that it needed to exercise a good deal of caution in the use of this information because of the very real difficulty in establishing comparability as between different producing areas on the basis of available data. It was found for example that the reference year frequently varied between cost estimates. The conceptual basis of cost estimates was often different, particularly with respect to the calculation of land use and marketing costs. An additional difficulty related to determining whether the grower or growers surveyed were in fact representative of the average grower for that producing area, in terms, for example, of acreage farmed or yields per acre. For a number of fruits and vegetables, the Board omitted cost of production data from its considerations because of doubts as to the usefulness of the information. The Board was of the opinion that the relative advantage or disadvantage of Canadian growers with respect to U.S. growers, in the long run, was often quite accurately demonstrated by the average farm value per pound in the two countries.

#### TERMINOLOGY AND APPROACH

The period of time under study covers, wherever possible, the years 1961 to 1975. The early sixties were deemed a good starting point, in view of the implementation in 1959 of most of the Board's recommendations pursuant to Reference No. 124, which also dealt with fresh and processed fruits and vegetables.<sup>(1)</sup> Developments during these years are mainly discussed with reference to five-year averages, 1961-65, 1966-70, and 1971-75 (or 1971-74). This approach commended itself not only because it digests the experience of 15 years into three figures but, more important, because year-to-year fluctuations in agricultural output are frequently very substantial and are often due more to weather conditions than to underlying structural circumstances; the reduction in the output of vegetables in 1972 illustrates this point. By the use of averages the more extreme fluctuations in any statistical series are ironed out, thus providing a fairer basis for comparison.

In this report, the words "fresh vegetables" or "fresh fruits" are used to refer to vegetables or fruits that, in essence, are in the form in which they are harvested. Fresh vegetables and fruits can be washed, trimmed, graded, waxed and packaged into individual consumer packs; they can be refrigerated, chilled or stored under controlled temperature and humidity, but they have not been processed, i.e., frozen, canned, dehydrated, etc. Fresh vegetables and fruits comprise produce for processing and for the fresh market.

When reference is made to the supply of a fruit or vegetable, the Board includes not only the supplies grown in Canada but also imports. This supply is then disposed of by way of export sales or sales on the domestic market. Wherever possible, Canadian production, imports and exports of fresh fruits and vegetables were divided

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(1) Report by the Tariff Board Relative to the Investigation Ordered by the Minister of Finance Respecting Fruits and Vegetables - Reference No. 124 (Ottawa, 1957).

into the volume for processing and for the fresh market. Moreover, in order to take account of the production lost to Canadian growers due to imports of processed fruits and vegetables and the production gained by exports of processed fruits and vegetables, the Board included the fresh equivalent weight of this trade in total exports and imports.<sup>(1)</sup>

As a result of the above distinctions, it was possible to estimate the total volume of a fruit or vegetable processed in Canada, and the proportion of it produced by Canadian growers and the proportion grown abroad. Furthermore total consumption in the processed form and fresh market consumption could also be determined separately. With respect to processed consumption, the volume processed in Canada could be compared with the volume, in fresh equivalent weight, processed abroad and imported. Similarly, total fresh market consumption could be divided into that met from domestic production and that imported.

The Board did not attempt to calculate consumption by region. While data on production, imports and exports are available on a regional basis, adequate statistics on interprovincial movements of fresh vegetables and fruits are lacking.

For the purposes of this report the term "competing imports" (or "competitive imports") designates imports of a fresh vegetable or fruit of a class or kind produced in Canada, during the period when Canadian supplies are easily available, either directly from the field or out of storage. Imports of a fresh vegetable or fruit which are not grown in Canada, or which take place during the period when Canadian supplies are not available, are deemed to be "non-competitive" in the sense that such imports do not directly displace Canadian produce in the market. The Board recognized however that all imports of fresh fruits and vegetables compete for consumer preference with each other as well as with domestic supplies of the same or other fruits and vegetables.

"Non-storable" vegetables and fruits, as defined by the Board, are those that must be consumed within a very brief period of being harvested; they are very perishable and, even with optimum storage conditions of low temperatures and high humidity, remain marketable for a maximum of two to three weeks only. Examples are lettuce, celery, radishes, green beans, corn, strawberries, cherries and grapes. "Storable" vegetables and fruits are those which, when properly stored, remain marketable for a considerable length of time after harvest. Principal examples include potatoes, carrots, onions, apples and pears.

For non-storable vegetables and fruits, the production period and the marketing period are practically identical; storage extends the marketing period very little. On the other hand, for storable produce the marketing period is substantially longer than

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(1) "Fresh equivalent" weight means the weight of fresh vegetables normally required to produce the weight of the processed product. The Board used standard ratios supplied by Agriculture Canada to convert processed weights into fresh equivalent weights.



the production period. The production period refers to the period of time beginning with the first day when domestic supplies come on the market and ending with the last day of harvest. The marketing period begins on the same day as the production period and ends on the last day that domestic supplies are available. These periods vary from region to region and from product to product. For analytical purposes, these periods were deemed to start and end at the beginning and end of a month, because the shortest time period for which most statistics are collected is one month. The term "in season" is on occasion used to denote the period when domestically grown supplies are available, in contrast to "out of season" or "off-season" when only imported supplies are available in any quantity.

The duration or length of the marketing period is seen by the Board as being an important consideration with respect to the determination of the maximum period for the application of the seasonal duty. The Board used information from various sources to ascertain the marketing period for fruits and vegetables grown in Canada. The most frequently used indicator was the time over which domestic produce is unloaded at the 12 principal wholesale markets, as reported by Agriculture Canada. For some storable products, such as potatoes and carrots, monthly reports on storage supplies also provided an indication of when domestic supplies begin to run out.

Statistics relating to non-storable fruits and vegetables are presented on a calendar-year basis, while data pertaining to storable commodities are based on the crop year (i.e., July 1-June 30). Whenever possible, the calendar year was used because other data, especially external trade statistics, are most readily available on this basis. For non-storable fruits and vegetables, the calendar year encompasses the entire domestic production and marketing season. For storable products, the marketing season begins in one calendar year and carries on into the next, sometimes continuing, as with potatoes, until the new crop is ready for harvesting.

The Board also attempted to estimate in the case of each commodity the additional cost to Canadian consumers and the additional income to Canadian growers that could result from the increases in tariff protection requested for fresh market fruits and vegetables by The Canadian Horticultural Council. An increase in protection provides financial benefits to government, to wholesale and retail distributors, and to Canadian growers of fruits and vegetables. The sum of these financial benefits constitutes the additional outlay or cost for Canadian consumers.

An estimate of additional consumer cost for a particular commodity was calculated by adding: (a) the additional revenues to government from higher rates of duty; (b) the added income to the Canadian grower based on the premise that he would price up to the level of the laid-down, duty-paid price of in-season imports; and (c) the higher wholesale and retail percentage mark-up resulting from a higher base price. A per capita consumer cost was derived from this total and expressed for each fresh fruit and vegetable in terms of the annual increase in spending for a family of four. Grower benefits were expressed in terms of the increase in gross returns per acre under cultivation.

In making these estimates the Board was conscious that because of the underlying assumptions the likely costs to the consumer were in all cases overstated. It is highly unlikely, for example, in the case of an increase in the duty, that the entire domestic output of each fresh fruit or fresh vegetable will be priced fully up to the new level of the tariff. In fact, there is evidence which indicates that at the height of the comparatively short Canadian production season, supplies of many horticultural products are so substantial as to push domestic prices below those of competing imports. In such circumstances the tariff does not constitute a cost to the consumer at all. The grower at such times does not benefit from protection and the estimated grower benefits also would be overstated. When the Canadian grower as a result of a tariff increase, increases his production at the expense of imports, the income of Canadian growers increases at no additional cost to consumers.

#### SCOPE AND ORGANIZATION OF VOLUME 1

In this volume, the Board is concerned with almost all fresh vegetables, both for the fresh market and for processing. Exceptions comprise vegetables classified under tariff items not specifically referred to the Board or subsequently added to the Reference by the Board. Among the exceptions are spices, cereals, peas and beans (other than green peas and green beans) lentils, sago, tapioca, truffles and sugar-beets. The tariff items relating to fresh vegetables specifically referred to the Board, or subsequently included for study are:

7120-1 - Seed potatoes	8713-1 - Eggplant
8305-1 - Potatoes, n.o.p.	8714-1 - Horseradish
8310-1 - Sweet potatoes and yams	8715-1 - Lettuce
8400-1 - Onion sets and shallots	8716-1 - Okra
8500-1 - Mushrooms	8717-1 - Onions, n.o.p.
8701-1 - Artichokes	8718-1 - Parsley
8702-1 - Asparagus	8719-1 - Parsnips
8703-1 - Beans, green	8720-1 - Green peas
8704-1 - Beets	8721-1 - Peppers
8705-1 - Brussels sprouts	8722-1 - Rhubarb
8706-1 - Cabbage	8723-1 - Spinach
8707-1 - Carrots	8724-1 - Tomatoes
8708-1 - Cauliflower	8725-1 - Watercress
8709-1 - Celery	8726-1 - Whitloof or endive
8710-1 - Corn on the cob	8727-1 - Broccoli
8711-1 - Cucumbers for pickles or preserves	8728-1 - Green onions
8712-1 - Cucumbers, n.o.p.	8729-1 - Radishes
	8730-1 - Turnips
	8731-1 - Fresh vegetables, n.o.p.

Most of the vegetables listed by name in the tariff items specifically included in this Reference are grown commercially in Canada. Exceptions are sweet potatoes, yams, okra and artichokes. Canadian production of whitloof and watercress is extremely limited. All vegetables not specifically mentioned above, whether or not they are produced in Canada, are classified under tariff item 8731-1.

This volume also deals with many fresh fruits, primarily those of a class or kind grown in Canada. Tropical citrus and other fruits of a class or kind not grown in Canada entering under specific tariff items were not referred to the Board and are excluded from this study. The tariff items on fresh fruits specifically referred to the Board are listed below.

9201-1 - Apricots	9211-1 - Strawberries
9202-1 - Cherries, sour	9212-1 - Berries, edible,
9203-1 - Cherries, sweet	n.o.p.
9204-1 - Cranberries	9300-1 - Apples
9205-1 - Peaches	9401-1 - Grapes, Vinifera
9206-1 - Pears	9402-1 - Grapes, Labrusca
9207-1 - Plums	9500-1 - Cantaloupes and
9208-1 - Prune plums	muskmelons
9210-1 - Raspberries and	9505-1 - Melons, n.o.p.
loganberries	9600-1 - Fruits, fresh, n.o.p.

The Board included nectarines in its study of peaches under tariff item 9205-1. Nectarines enter currently under tariff item 9209-1 "Quinces and nectarines," an item not referred to the Board.<sup>(1)</sup>

Chapter II presents an overview of the fruit and vegetable growing industries in Canada in order to provide a national and regional perspective for the reports and recommendations for the individual commodities. This general background is followed by a review (Chapter III) of the written and oral submissions made to the Board with respect to the tariff on fresh fruits and vegetables and of the proposals brought forward by interested parties.

Chapter IV discusses a number of general issues pertaining to the tariff schedule for fresh fruits and vegetables, such as the additional duty on fresh vegetables entering in consumer-sized packages and specific duties as against ad valorem duties. The Board's conclusions and recommendations with respect to these general tariff issues are presented in this chapter also.

Chapter V deals exclusively with an examination of various measures to counter the adverse effects on growers of low-priced imports or the threat of such imports. The "automatic" safeguard mechanism proposed by The Canadian Horticultural Council is dealt with in this chapter. It concludes with the Board's recommendations with regard to this issue. Chapter VI deals with consumer interests.

Chapter VII presents the Board's tariff and tariff-related recommendations on fresh vegetables and fresh fruits in the form of a revised schedule. As indicated earlier, the individual commodity reports, providing the evidence and considerations on which these recommendations are based, will be submitted in Part II of this volume.

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(1) That part of Schedule "A" of the Canadian Customs Tariff pertaining to the tariff items covered by Reference No. 152 is reproduced in Appendix A, pp. 187-202.

ACKNOWLEDGEMENTS

The Board expresses its appreciation to the growers and representatives of the horticultural industry, to the many associations, boards and agencies which have an interest or are engaged in the production, marketing and processing of horticultural products in Canada, to a number of government departments at the federal and provincial levels and, particularly, to those who submitted briefs, participated in the public sittings and in the Board's questionnaire surveys and who, through discussions and in other ways, contributed to the Board's understanding of the issues and facilitated the task of the Board and of its staff.



## CHAPTER II: VEGETABLE AND FRUIT GROWING IN CANADA

In arriving at its tariff recommendations for the individual fruits and vegetables, one of the Board's considerations was the present state of the fruit and vegetable growing industries as a whole and the developments which have taken place in these industries since 1960, roughly the period following the Board's last review of these commodities. These broader aspects are relevant because a relatively poor market performance by growers of one fruit or vegetable is apt to be less disturbing if the industry as a whole is otherwise healthy and vigorous. In these circumstances the growers in a weak segment often can switch resources to the many more viable ones, an option not as easily undertaken when the industry, overall, is experiencing difficulties. Moreover, an overview is also desirable from the viewpoint that individual commodities are appreciated more accurately from an industry perspective, rather than in isolation when they so readily assume an exaggerated importance.

The purpose of this chapter is therefore to present the more general developments that have taken place in fruit and vegetable growing in Canada since 1961. In this regard production, and the factors affecting production, such as acreage and yields, will be looked at first. Then the rapid rise in farm-gate prices, especially during the 1970s, is examined. The international competitive position of Canadian growers, as measured by exports and imports is considered next, especially the level of imports during the period when Canadian supplies are available. The discussion also includes trends in consumption and consumption patterns. These broad considerations are presented separately for vegetable growing first and then for fruit growing. The chapter concludes with a discussion of the cost of producing fruits and vegetables in Canada and the United States.

### A. - VEGETABLE GROWING

Canadian vegetable growers produce as many as 50 different vegetables ranging from potatoes and tomatoes to kale and salsify. The Board has included all these vegetables in its tariff recommendations, and has considered 42 of them in some detail. It is readily apparent that, for the purpose of the overview presented in this chapter, a classification of these individual vegetables in a number of distinct groups would greatly facilitate the analysis of the pertinent statistical information and its presentation.

Since the overview attempts to describe the developments in the Canadian vegetable growing industry over the period 1961-1975 as well as its present structure, it was not possible to include those vegetables for which consistent data were not available over the relevant period. This meant that the overall examination of this industry was confined to the 17 vegetables for which Statistics Canada maintains and publishes data on production, acreage and farm value. While these 17 vegetables account for only about a third of the 50 or so vegetables grown in Canada, they are by far the more important ones, accounting for about 95 per cent of the volume and value of production of all vegetables.



The 17 major vegetables are divided into four, and sometimes five classes. The first is potatoes which are singled out because of their very great importance in the total. Frequently a particular development in the potato growing industry obscures completely what is happening to other vegetables, so that its isolation as a separate class will often be very revealing. The second group comprises the four main processing vegetables: peas, corn, tomatoes and snap beans. These four vegetables, more so than most others, are mainly processed rather than sold to the fresh market, and together with potatoes, account for the bulk of vegetable processing. The third group includes onions, carrots, celery and lettuce. These are four vegetables which are primarily produced for the fresh market and grown on organic or "muck" soils. "Other" vegetables, namely asparagus, beets, cabbage, cauliflower, cucumbers, parsnips, spinach and turnips are included in the fourth group. Frequently turnips are broken out of the latter class because of the distorting effects caused by the sharp decline in their importance.

Data for the 17 major vegetables refer to field production only, and do not include mushrooms or vegetables grown in greenhouses. Inclusion of controlled environment output would have unnecessarily complicated various aspects of the following discussion, such as with respect to yield per acre; not only was the Board unable to obtain accurate data on the area under cultivation for greenhouse vegetables and mushrooms but the yields, compared to field production, are very high. Another factor is that only two field-grown vegetables, tomatoes and cucumbers would be affected; other vegetables are not important for greenhouse production and are normally grown outside only. Similarly, there is no commercial field production of mushrooms at all. The greenhouse and mushroom industries will be presented in the individual reports relating to vegetables in Volume 1, Part II of this Reference. The following paragraph indicates the size of these industries.

In 1974 there were 438 growers of greenhouse vegetables in Canada and 128 mushroom houses. Greenhouse production of vegetables is highly specialized, with some 99 per cent of production being accounted for by tomatoes and cucumbers. Greenhouse production relative to field production is significant particularly for these two vegetables. Overall, in relation to the total production of all vegetables, it is relatively unimportant, especially in terms of volume where it accounts for less than 1 per cent. In value terms, its importance is greater; greenhouse vegetables, coming on to the market during the off-season, are considerably higher priced than field-grown vegetables. Greenhouse production in 1971-74 totalled \$14 million or roughly 5 per cent of the farm value of all fresh vegetables produced in Canada.

Production of mushrooms in volume terms, is similarly unimpressive when compared to the total output of all vegetables; it was equivalent to approximately 0.5 per cent of total Canadian vegetable output. However the value of mushroom production, averaging \$20 million in 1971-74, was about the same as the farm value of field tomatoes, the second-ranking vegetable after potatoes. In total, the \$34 million dollars of greenhouse vegetables and mushrooms produced annually in Canada during 1971-74 was equal to nearly 13 per cent of the total farm value of all other vegetables.

## LOCATION

The production of vegetables requires a minimum number of sunny and frost-free days. As a result, the major portion of the industry is located within a 100-mile belt running along the border between Canada and the United States, where there is an adequate period of sunny days between the early and late frosts to allow for economically viable commercial production. Within this belt, agronomic and locational factors have defined numerous concentrated areas of production, often specializing in only a few crops.

Vegetables will grow on almost any type of soil but they generally do best on organic soils or mineral soils with a high organic matter content. Moreover, most fresh vegetables are bulky, as such they are expensive to transport and store, and many deteriorate rapidly once harvested, so that vegetables grown for the fresh market are usually produced in areas that are adjacent to metropolitan centres. A large portion of the vegetable production for the fresh market is, therefore, concentrated in three areas in Canada: (a) the muck soils of the Bradford Marsh just north of Toronto, Ontario, (b) the muck soils in the L'Assomption area close to Montreal, Quebec, and (c) the muck soils of the Lower Fraser Valley near Vancouver, British Columbia. Vegetables are also grown on smaller pockets of organic soil in other places, for example, the Eriean Marsh in southwestern Ontario, and the Mer Blue outside of Ottawa, Ontario. Organic or muck soils generally yield a larger volume of production per acre than other soils. This factor, in addition to the limited availability of muck soils in suitable locations, has greatly increased the value of that land. Consequently, usage of developed muck soil areas is mainly restricted to production of the relatively higher yielding, higher valued fresh market vegetables, such as lettuce, celery, onions, and carrots.

Due to the lack of extensive additional acreages of muck soils most vegetables are grown primarily on mineral-type soils. Vegetable production outside the three aforementioned areas takes place throughout central and southern Ontario and southern Quebec, and also in southern Manitoba, on irrigated areas of southern Alberta, the interior of southern British Columbia, in Prince Edward Island, and in New Brunswick. Vegetables produced for processing, such as snap beans, sweet corn, peas and potatoes, are grown on relatively cheaper land, in acreages which permit mechanized harvesting. Climate confines the production of tomatoes largely to southern Ontario. On the other hand, potatoes, a storable vegetable, are one of the most profitable cash crops in Prince Edward Island and New Brunswick and certain areas of the Prairies. These areas have, in fact, developed extensive outside markets and tend to specialize to a large degree in the production of this single vegetable.

The Canadian vegetable growing industry, with only one crop, primarily a summer crop, differs greatly from that in the United States which produces vegetables all year round. With respect to fresh market vegetables, other than potatoes, roughly 15 per cent of total U.S. production is produced in the winter, 25 per cent in the spring, 40 per cent in the summer and 20 per cent in the fall. As one would expect the winter and spring crops are grown in the

southern states and mostly in southern California, Florida, Texas and Arizona, in descending order. The summer and fall crops of fresh market vegetables are produced in part in these southern states and also in the northern states adjacent or near the U.S.-Canadian border. These northern states produced, in 1975, 35 per cent of the U.S. summer crop of fresh market vegetables, excluding potatoes, and 25 per cent of the fall crop. While these percentages indicate significant production in the states adjoining Canada, their share of seasonal fresh market vegetable output in the United States is less than their share of that country's population.

Thus, these states would appear to be dependent, during their own production season, for part of their market requirements on supplies from the southern vegetable producers. This would tend to suggest in general that competition from growers in these states for the Canadian industry would not be great. However, excess summer and fall supplies in California, Florida, Texas, and Arizona can from time to time cause pressure on fresh market vegetables in the northern states, which in turn is transferred to the Canadian market. Over-production in California, etc., can make itself felt also directly in Canada. Moreover, it should not be overlooked that the more northern producers in the United States may themselves, on occasion, have excess supplies of one vegetable or another, which would be felt by Canadian growers.

Production of fresh market vegetables in the United States, other than potatoes, for summer and fall harvest is more than 10 times as large as the production of similar fresh market vegetables in Canada during the same period; the summer and fall production in California and the northern states are each approximately four times as large as Canadian output. It is evident, therefore, that any relatively small percentage increases in U.S. production that are diverted to exports to Canada can produce a great deal of pressure on the Canadian market. For example, an increase in U.S. exports to Canada by an amount equal to 5 per cent of U.S. summer and fall fresh market production would mean an influx of additional imports to Canada equal to over half of total domestic fresh market output other than potatoes.

In addition to the difference in the size of the two industries, is the problem of the northward progression of fruit and vegetable growing and harvesting in North America which puts many Canadian growers in last position; last to get the crop in and last to get the crop on the market. In this situation, the early crop in Canada tends to be marketed when the marketing season in the United States is already well under way, and when price levels in that country, and hence Canadian import prices, are beginning to recede from their early-season levels. To some extent this problem is faced by all domestic growers of fresh market vegetables, although it must be recognized that growers in southern Ontario and Quebec are located at least as favourably as growers in Michigan, Wisconsin, Minnesota, and Idaho.

The northern states of the U.S. dominate the production of processing vegetables in that country. Over 80 per cent of all potatoes and about three-quarters of all vegetables processed in the United States, excluding tomatoes, are grown in states which have climatic conditions comparable to the Canadian industry; tomatoes for processing are mainly grown in California. Vegetables for processing are generally not grown on the more valuable land in southern growing regions, because the fresh market on a year-round basis is more profitable. As in Canada, processing vegetables are grown on relatively less costly land. It is readily apparent, moreover, that the production of potatoes and processing vegetables in both countries takes place under mostly comparable conditions, with the major exception of tomatoes. That is not to say that climatic conditions are identical, but rather that other factors such as scale of production, management, and farm input costs take on greater importance.

#### ACREAGE

Acreage used for vegetable production averaged slightly over 500,000 acres per year for the five years 1971 to 1975, a decrease of approximately 4 per cent over the average of 1961-65 (Table 1). Potatoes and rutabagas are responsible for the major portion of this decline.

Potatoes, which are grown commercially in all provinces, and the single most important vegetable crop accounting for over half of the total acreage in vegetables, declined by close to 10 per cent (Charts I and II). The acreage of rutabagas and other root crops such as parsnips and beets have also declined; the preparation of these vegetables is too time-consuming for many housewives, given the wide range of other vegetables available year round. Regionally, the decline in the potato acreage has been confined entirely to the provinces of Quebec and Ontario, particularly the former. The Maritimes and Ontario were most affected by the drop in the area planted to rutabagas (Appendix Table 3).

Table 1: Vegetables: Acreage and Percentage Distribution, by Major Vegetable Group, Annual Average, 1961-65, 1966-70, and 1971-75

	<u>Acreage</u>			<u>Percentage Distribution</u>		
	1961-65	1966-70	1971-75	1961-65	1966-70	1971-75
	- acres -			- per cent -		
A. Potatoes	290,360	309,360	263,220	55.0	56.7	51.8
B. Main processing vegetables	164,589	168,448	177,250	31.2	30.9	34.9
C. Main organic soil vegetables	28,054	27,846	30,339	5.3	5.1	6.0
D. Mineral soil vegetables <sup>(a)</sup>	28,272	27,908	29,056	5.4	5.1	5.7
E. Turnips (rutabagas)	16,780	11,804	8,621	3.2	2.2	1.7
Total	528,054	545,366	508,486	100.0	100.0	100.0

(a) Mainly for fresh market.

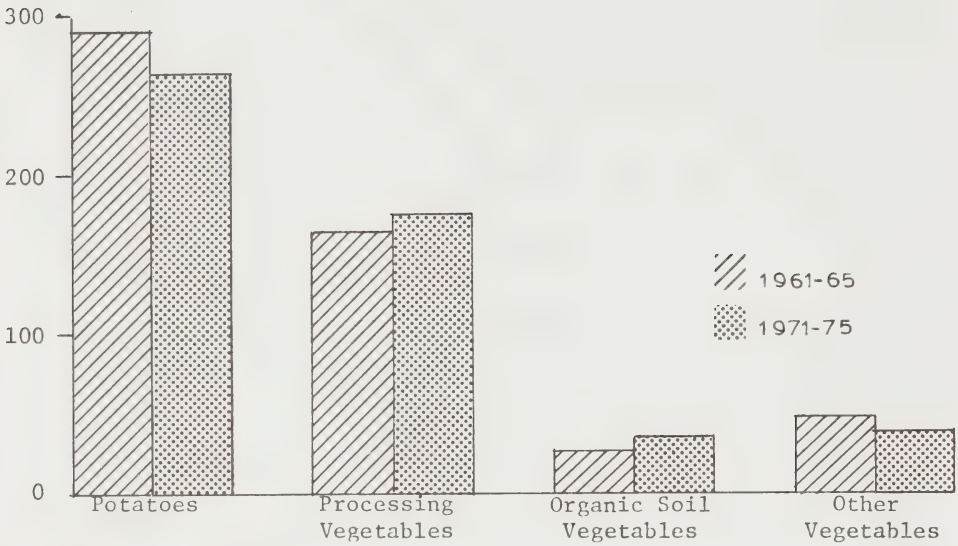
Source: Appendix Table 1.



Chart I

Vegetables: Acreage, by Vegetable Group,  
Annual Average:  
1961-65 & 1971-75

Acres  
'000

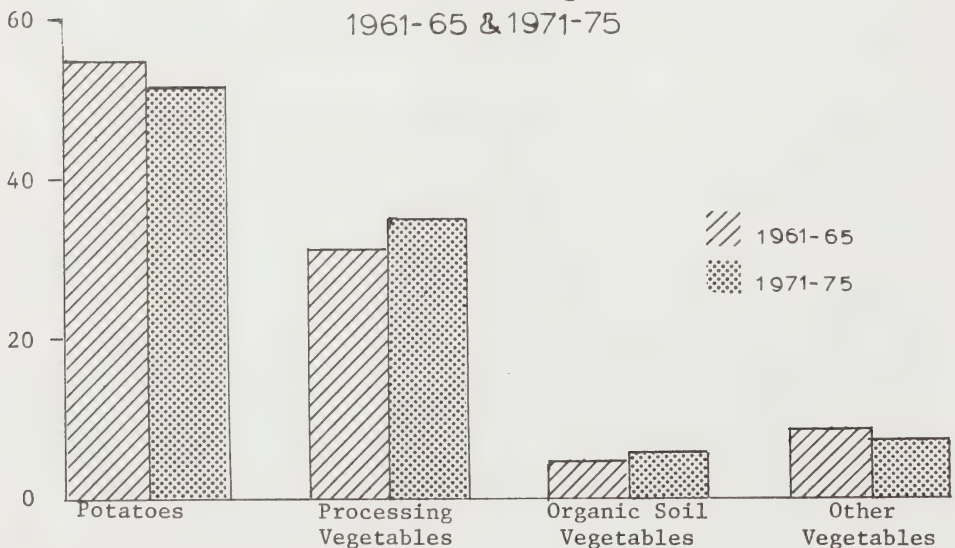


Source: Appendix Table 1.

Chart II

Vegetables: Main Vegetable Groups, as a  
Percentage of Total Canadian  
Vegetable Acreage,  
Annual Average:  
1961-65 & 1971-75

%



Source: Appendix Table 2.

The acreage under the four main processing vegetables has increased moderately, and this group of vegetables now accounts for slightly more than a third of the total vegetable acreage. The four main muck soil vegetables, with an annual average of close to 30 thousand acres, also expanded their area under production during the period under study. But they, like the "other" vegetables group, account only for about 6 per cent of the total. As shown in Appendix Tables 1 and 2, the overall change in acreage under vegetables represents the net effect of a number of much larger increases and decreases in the acreage of individual vegetables; note the substantial reductions for tomatoes and spinach, in addition to parsnips, beets, and turnips, - and the increases for sweet corn, carrots, and cabbage. As will be seen later in this section, most increases in production acreage have represented increased production for processing rather than for the fresh market.

Nearly a third of the total Canadian vegetable acreage is located in Ontario (see Table 2), more than any other province or region. More than half of Ontario's acreage is used for the four main processing vegetables. This proportion has increased during the period under study, because the growth in the Canadian acreage used for this group of vegetables has taken place largely in that province especially that for sweet corn. Potatoes accounted for a little more than a quarter of the provincial vegetable acreage, and this share has been declining. Only 6 per cent of the provincial total is under celery, lettuce, carrots, and onions. Excluding potatoes, Ontario's vegetable acreage represents half of the Canadian total.

Table 2: Vegetables: Interregional and Intraregional Distribution of Acreage, by Major Group, Annual Average 1971-75

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- per cent -					
<u>Intraregional</u>						
<u>Distribution</u>						
Potatoes	85.4	38.8	25.7	83.6	41.9	51.8
Main processing vegetables	10.9	40.1	57.3	11.0	39.5	34.9
Main organic soil vegetables	1.1	12.1	6.0	2.7	7.2	6.0
Other vegetables <sup>(a)</sup>	2.6	9.0	11.0	2.7	11.4	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
<u>Interregional</u>						
<u>Distribution</u>						
Potatoes	39.7	18.7	16.3	21.2	4.1	100.0
Main processing vegetables	7.5	28.6	54.0	4.1	5.7	100.0
Main organic soil vegetables	4.4	50.5	33.1	6.0	6.1	100.0
Other vegetables	8.4	30.3	48.8	4.8	7.7	100.0
Total	24.1	24.9	32.8	13.1	5.0	100.0
Total, excluding potatoes	7.3	31.6	50.6	4.5	6.1	100.0

(a) Mainly for fresh market.

Source: Appendix Table 4.



Quebec accounted in recent years for about a quarter of the Canadian acreage in vegetables. This proportion has dropped during the period under review due to a sharp reduction in potato acreage. This vegetable still represents close to 40 per cent of the provincial vegetable acreage, but it accounted for close to half in 1961-65. The acreage under the four main processing vegetables has also diminished somewhat; combined, these four vegetables also account for nearly 40 per cent of the province's acreage under vegetables. Twelve per cent of the provincial total comprised the four main muck soil vegetables.

The distribution of the British Columbia acreage shows a pattern much like that in Quebec. However, the actual area in each group of vegetables is much smaller; British Columbia, with 26 thousand acres under vegetables in 1971-75, accounted for only 5 per cent of the Canadian total. Moreover, its relative importance as a grower of vegetables other than potatoes is not much greater, 6.1 per cent.

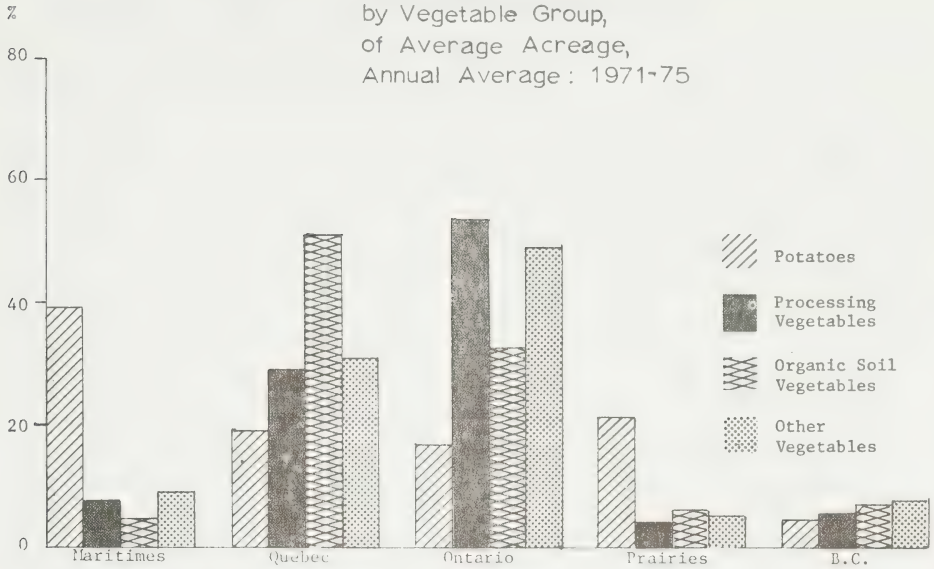
Vegetable growing in the Maritimes and the Prairies is very similar; it is in both instances dominated by potatoes, which account for roughly 85 per cent of the total vegetable acreage. This vegetable has, moreover, been increasing in importance. The Maritimes had a total of 122 thousand acres under potatoes and other vegetables, during 1971-75, and the Prairies 67 thousand. This represented 24.1 and 13.1 per cent of the total Canadian vegetable acreage respectively. Excluding potatoes, these two regions have an acreage much the same as British Columbia (Charts III and IV).

Of the total acreage in potatoes in Canada in 1971-75, two-fifths was in the Maritimes and one-fifth in the Prairies. This concentration has increased significantly during the period under study, as the acreage in Ontario and Quebec has dropped considerably. British Columbia's potato acreage has been relatively small. Ontario accounted for around half of Canada's acreage of the four main processing vegetables and "other" vegetables, followed in each instance by Quebec with nearly 30 per cent; this order was reversed with respect to the four muck soil vegetables.

The land used for vegetable production in Canada is but a small portion of all crop land. The half million acres used for vegetables in 1971-75 represented less than 1 per cent of the total acreage under crops in Canada in 1971 (see Table 3). The apparent relative unimportance of vegetables on a national basis is largely the result of the huge grain growing areas in the Prairies, which contain 80 per cent of the total acreage under crops in Canada, but where only 0.1 per cent of the available acreage is used for vegetable production. In comparison, the acreage used for vegetables in the Maritimes accounts for more than 13 per cent of the total acreage under crops in that region. For the other regions, vegetable acreage accounts for between 2 and 3 per cent of the total acreage under crops, although the acreages involved differ significantly.

Chart III

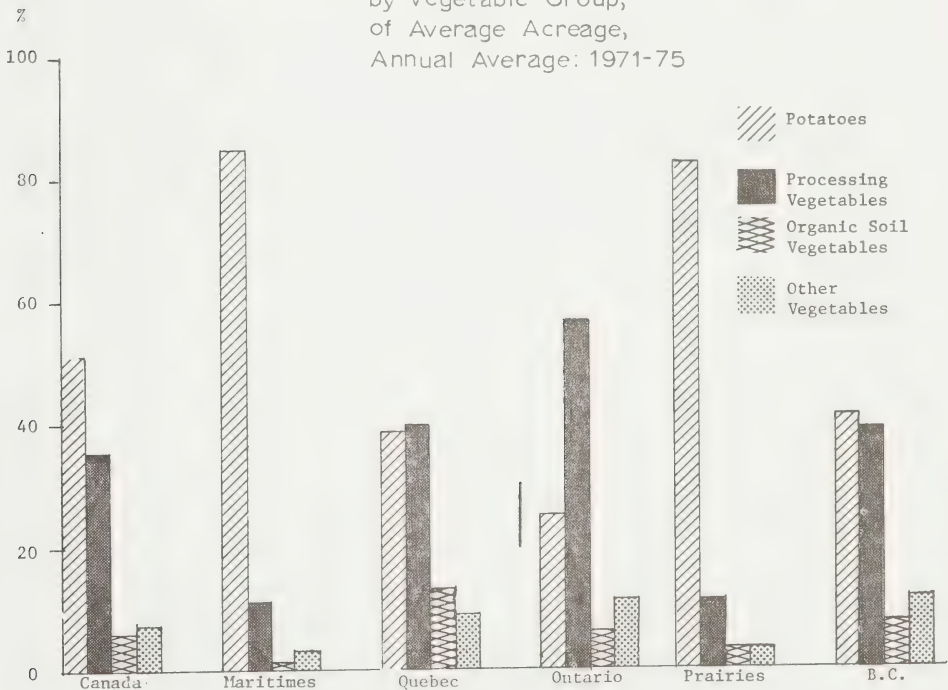
Vegetables: Inter-Regional Distribution,  
by Vegetable Group,  
of Average Acreage,  
Annual Average: 1971-75



Source: Appendix Table 4.

Chart IV

Vegetables: Intra-Regional Distribution,  
by Vegetable Group,  
of Average Acreage,  
Annual Average: 1971-75



Source: Appendix Table 4.

Table 3: Vegetables: Total Improved Acreage, Total Acreage Under Crops, and Acreage Used for Vegetables, by Region

	<u>Canada</u>	<u>Maritimes</u> <sup>(a)</sup>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>
- '000 acres -						
<u>Acreage</u>						
Total improved acreage <sup>(b)</sup> (1971)	108,149	1,368	6,450	10,865	87,691	1,755
Total acreage under crops (1971)	68,766	917	4,337	7,856	54,554	1,093
Acreage used for vegetables (av. 1971-75)	508	122	127	167	67	26
- per cent -						
<u>Regional Distribution</u>						
Total improved acreage	100.0	1.3	6.0	10.0	81.1	1.6
Total acreage under crops	100.0	1.3	6.3	11.4	79.3	1.6
Acreage used for vegetables	100.0	24.1	24.9	32.8	13.1	5.0
- per cent -						
<u>Acreage used for Vegetables as a Percentage of:</u>						
Total improved acreage	0.5	8.9	2.0	1.5	0.1	1.5
Total acreage under crops	0.7	13.3	2.9	2.1	0.1	2.4

(a) Excludes Newfoundland.

(b) Comprised of acreage under crops, pasture (improved), summer-fallow and other improved land in 1971.

Source: Statistics Canada.

### NUMBER OF GROWERS

In 1971, the Census of Canada indicated that there were, at that time, 12,447 growers of potatoes for sale and 16,120 growers of other vegetables mainly for sale (see Table 4).<sup>(1)</sup> Unfortunately, differences in the 1971 Census do not allow for a strict comparison of the total number of vegetable growers in each of these years. The change in the number of growers of potatoes for sale is not known, but the number of growers of other vegetables appears to have decreased by approximately one-third between 1961 and 1971. While the number of growers decreased, a large proportion of this decrease was the result of consolidation of farms rather than an elimination of acreage for use in vegetable production. There was actually a slight increase over the decade in total acreage devoted to vegetable production, excluding potatoes, with the result that the average acreage per grower in Canada increased by nearly two-thirds, from 9.5 acres in 1961 to 15.8 acres in 1971. Although undoubtedly further consolidation and increases in "farm" size have occurred since that time, it seems clear that the scale of production for the average commercial vegetable grower is small. This would apply particularly to production for the fresh market, which is still dominated by a large number of market-gardeners, growers who produce a large number of vegetables in small volumes with mostly manual labour for direct sale to the consumer. On the other hand, it would seem that a relatively small number of growers, with relatively large acreages each, account for the bulk of the acreage and production of vegetables in Canada, and that such operations, especially those producing for processing, are already mechanized, or are moving in that direction.

As would be expected the largest number of growers are in areas adjacent to the population centres of Quebec and Ontario. The average acreage per grower in these two regions, for vegetables other than potatoes, tends to be slightly higher than the national average. The average area under vegetables per grower in other regions is smaller than in Ontario and Quebec, but, with the exception of the Maritimes, not by much.

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(1) In 1961, the Census noted all farms listing acreage of potatoes, whether for sale or not. On that basis nearly half of all farms in Canada produced potatoes; however, over 80 per cent of these farms had less than 1 acre devoted to potato production. Because of these differences in definition, 1961 and 1971 data are not comparable.

Table 4: Vegetables: Number of Growers and Average Acreage Under Vegetables per Grower, by Region, 1961 and 1971<sup>(a)</sup>

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u> <sup>(b)</sup>
<u>1961</u> <sup>(c)</sup>						
Number of growers	2,196	6,626	10,629	1,445	1,491	22,874
Average acreage per grower	3.7	9.7	10.4	14.5	8.3	9.5
Distribution of growers (%)	9.6	29.0	46.5	6.3	6.5	100.0
<u>1971</u>						
<u>Potatoes:</u>						
Number of growers	3,331	4,914	2,309	970	566	12,447
Average acreage per grower	32.9	9.7	17.3	64.0	16.0	21.7
Distribution of growers (%)	26.8	39.5	18.6	7.8	4.5	100.0
<u>Other Vegetables:</u>						
Number of growers	1,413	4,328	7,947	909	1,144	16,120
Average acreage per grower	10.4	18.7	15.9	14.9	15.7	15.8
Distribution of growers (%)	8.8	26.8	49.3	5.6	7.1	100.0

(a) "Census Farm": One or more acres of land and \$50 or more worth of goods sold.

(b) Includes Newfoundland.

(c) Excludes potatoes and rutabagas (turnips).

Source: Census of Canada.

While both the Maritimes and the Prairies have smaller average acreages per grower for vegetables other than potatoes, it must be remembered that potatoes are the most important crop in these two regions. In these regions the number of commercial potato growers exceeds the number of growers of all other kinds of vegetables combined, in the case of the Maritimes by a ratio of two to one. Moreover, as is evident in Table 4, the average acreage under potatoes is several times greater than that for other vegetables. Potato production, like sweet corn and green peas grown for processing, is highly mechanized and lends itself to larger acreages more so than most other vegetables.

YIELDS

Each acre under vegetables in Canada produced on average 15,229 pounds, or more than 7.5 tons, of produce per year during the period 1971-75 (Table 5). This average yield per acre increased by nearly 10 per cent or 1,300 pounds, over the average for 1961-65, reflecting increased productivity in the production of a large number of vegetables. Celery ranked as the highest-yielding vegetable with an average of nearly 44 thousand pounds, while asparagus was the lowest with 1,700 pounds. As a group, muck soil vegetables have the highest average yield per acre, while the main processing vegetables have the lowest. The difference between these two groups would be even larger if the high yielding tomatoes were excluding from the latter group (Appendix Table 7). Of the 17 major vegetables only six realized lower yields in 1971-75 than in 1961-65, most notably parsnips and spinach. Yields improved most for cucumbers, tomatoes, celery and potatoes.

Table 5: Vegetables: Average Yield per Acre<sup>(a)</sup>, by Region, by Group  
Annual Average, 1971-75

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- lb. per acre -					
Potatoes	21,666	13,921	19,214	15,296	23,103	18,526
Main processing vegetables	3,059	3,992	12,653	5,377	7,130	8,831
Main organic soil vegetables	21,025	15,585	34,006	21,987	27,118	22,998
Other vegetables	16,363	11,674	19,639	15,782	10,134	16,031
Total	19,488	9,941	16,392	14,399	15,600	15,229

(a) With the exception of the main processing vegetables, average yields are based on total acreage planted rather than acreage harvested.

Source: Appendix Tables 7 and 8.

Yields, with the exception of potatoes, are highest in Ontario. The Ontario advantage, in this respect, is particularly large for the four main processing vegetables; however, this figure is unduly influenced by the concentration in that province of Canadian tomato production, which has considerably higher yields than beans, peas, and sweet corn, the three other main processing crops. Once tomatoes are excluded, Ontario's yields of the main processing vegetables are second to British Columbia. British Columbia ranks first in potato yield, and ranks a high second to Ontario in yields of organic soil vegetables. Overall yields of vegetable growers in Quebec were the lowest in Canada for the period 1971-75. It should be noted that, while yields of vegetables in this province have not compared favourably with other Canadian regions at any other time during the period under review, the



level for 1971-75 was pulled down considerably by the poor crop in 1972. Overall yields in the Maritimes and the Prairies are considerably influenced by the yield for potatoes; however, yields in the Maritimes for the main groups were comparable to the all-Canada level with the exception of the main processing vegetables where this region was much lower, because it lacks processing tomatoes. The Prairie region is below the national average, most notably with respect to potatoes.

The average yield realized for all vegetables increased in every region from 1961-65 to 1971-75, except in Ontario. In the case of Ontario, the number of improvements in yield were greater than the number of declines, but that province increased its production of the lower yielding processing vegetables, causing a decline in its overall average. In British Columbia production is concentrated in those vegetables which have higher yields and for which yields have increased.

#### PRODUCTION

Canadian growers produced annually, during 1971-75, an average of 7.7 billion pounds of vegetables, 5.4 per cent more than the 7.4 billion pounds grown during 1961-65 (Table 6). Overall, this increase in vegetable production was the result of higher yields or greater productivity, because, as was seen earlier, the number of acres under vegetables declined. Inasmuch as the Canadian population expanded more rapidly during this period than vegetable production, per capita production actually decreased.

Table 6: Vegetables: Production, by Region, by Group,  
Annual Average, 1971-75

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- '000 lb. -					
Potatoes	2,264,960	684,900	825,040	853,800	247,660	4,876,360
Main processing vegetables	40,929	202,702	1,209,993	39,500	72,170	1,565,293
Main organic soil vegetables	28,089	238,698	341,246	39,731	49,979	697,740
Other vegetables	<u>51,741</u>	<u>135,731</u>	<u>360,870</u>	<u>28,566</u>	<u>29,531</u>	<u>606,435</u>
Total	2,385,719	1,262,031	2,737,149	961,597	399,340	7,745,828

Source: Appendix Tables 9 and 11.

Potatoes have a higher average yield than the average vegetable crop and therefore are even more important in terms of total production than acreage, accounting for 63.0 per cent of the total volume (Appendix Table 10). In comparison, because of relatively low yields, the four main processing vegetables account for only 20.2 per cent of total production, considerably less than the percentage that these vegetables make up of the total acreage. The four muck soil vegetables accounted for 9.0 per cent of total production, while other vegetables accounted for 7.8 per cent. Production of other vegetables declined relatively, in large part the result of a greatly reduced output of rutabagas. It is noteworthy that the four main processing vegetables accounted for 54.6 per cent of total output excluding potatoes, a percentage which has been increasing over the period under review, despite a slight decline in tomato production.

The Maritimes produced nearly one-third of all vegetables in Canada, a proportion greatly exceeding its share of the Canadian population. Of course, this high proportion is due to potatoes; the Maritimes accounted for 47 per cent of all potatoes produced in Canada, and that single vegetable represents 95 per cent of the region's total vegetable production. By contrast, the Maritimes produced less than 5 per cent of vegetables other than potatoes. Thus, although the region ships large amounts of potatoes either in the fresh or processed form to external markets, it depends on interregional shipments or imports for the largest part of its consumption of other vegetables.

The vegetable growing industry in the Prairies is, as in the Maritimes, dominated by potatoes. This region accounts for 12.4 per cent of Canadian vegetable production, and potatoes represent close to 90 per cent of that amount. For vegetables other than potatoes, the Prairies produced only about 3 to 4 per cent of the Canadian total during 1971-75. As with the Maritimes, the Prairies rely greatly on imports and interregional movements to supplement local production.

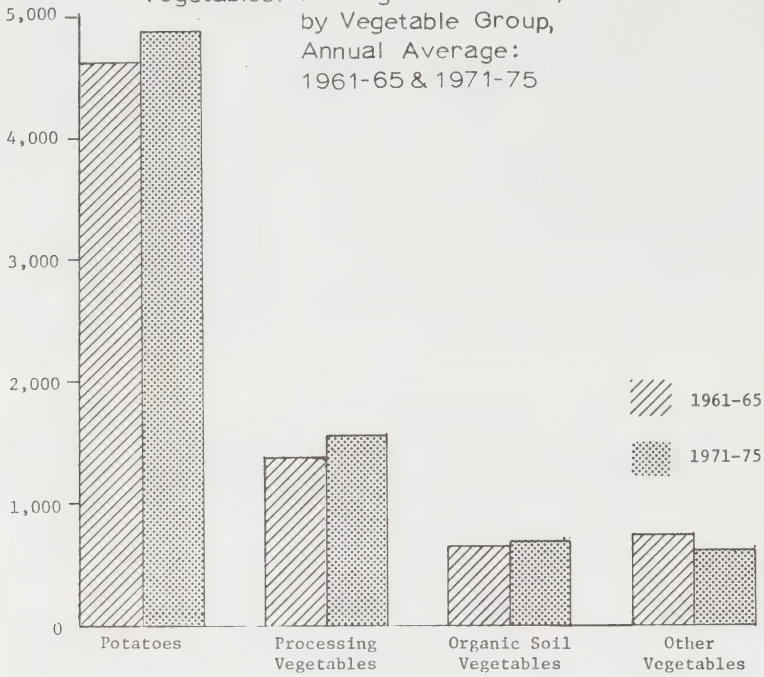
Ontario is the largest producer of vegetables in Canada, growing slightly more than 35 per cent of the Canadian total. Excluding potatoes, for which it ranks third after the Prairies, the province accounts for almost 67 per cent of total production, clearly more than its share of the population. Thus, Ontario would appear to be a net exporter of all vegetables except potatoes. This province ranks first in production of each of the other vegetable groups; and its primacy is particularly evident in the production of the four main processing vegetables, of which it had nearly 80 per cent of the Canadian total in 1971-75.

Quebec produced during 1971-75, on average, about 16 per cent of all vegetables grown in Canada. Potatoes are by far its major vegetable crop, representing over half of provincial vegetable production. The province, the second largest producer of vegetables other than potatoes, accounted for 20 per cent of the Canadian total. Its position in this respect is well behind that of Ontario, largely because its production of the main processing vegetables is so very much smaller, 203 million as against 1,210 million pounds.

Million  
Pounds

Chart V

Vegetables: Average Production,  
by Vegetable Group,  
Annual Average:  
1961-65 & 1971-75

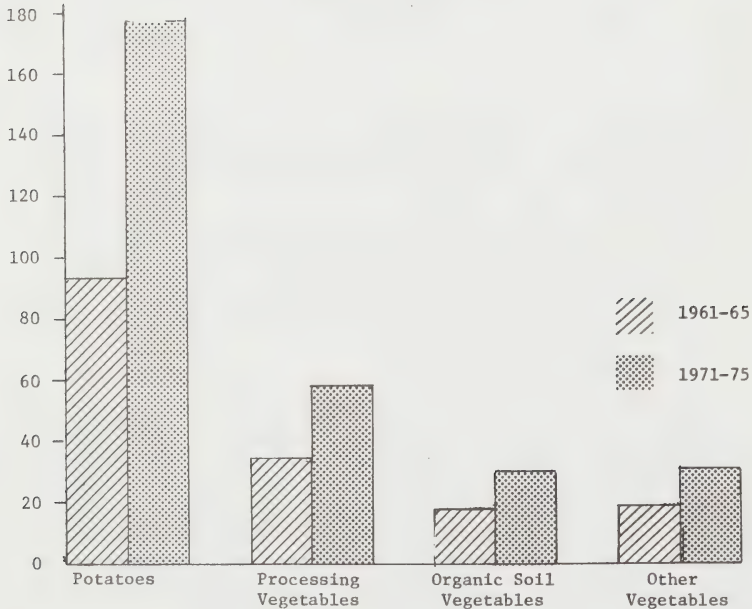


Source: Appendix Table 9.

Chart VI

Vegetables: Average Farm Value,  
by Vegetable Group,  
Annual Average:  
1961-65 & 1971-75

\$'000



Source: Appendix Table 13.

The prominence of Ontario, as a grower of the main processing vegetables, is primarily the result of the concentration of tomato production in that province (see Appendix Table 11). Tomatoes, in volume terms, are, with the exception of potatoes, by far the most important vegetable for processing.

British Columbia produces about 8 per cent of the muck soil vegetables in Canada and about 5 per cent of each of the other vegetable groups. Unlike the other regions, there is no vegetable group for which regional production as proportion of the Canadian total exceeds the region's proportion of national population. Thus British Columbia is apparently a net importer of each group of vegetables, although this is not necessarily true of all individual vegetables.

While vegetable production in Canada as a whole expanded very little, 5.4 per cent between 1961-65 and 1971-75, the output of the main processing vegetables rose by 13 per cent, due primarily to increased production of sweet corn; the growth in production of peas and snap beans was just sufficient to offset the decline in tomato production. Increases in potato yields were more than sufficient to offset the decline in acreage, with the result that potato production expanded by 5.9 per cent. Production of the muck soil vegetables increased by 9.9 per cent, while the production of "other" vegetables was off by 16.3 per cent. In the latter case, the decline was due primarily to lower production of rutabagas; cucumbers and cabbage are notable for substantial growth in output.

Among the various regions and provinces, the position of the Maritimes, the Prairies and British Columbia has been enhanced, while that of Ontario and Quebec has diminished. The major factor underlying this structural change is potato production. The output of this crop, which has increased in Canada as a whole during the period under study, declined sharply in Ontario and Quebec, while it expanded substantially in the other regions. This shift is probably in part due to the fact that potatoes are increasingly processed, and hence offer an important opportunity for industrialization, and job creation.

The production of vegetables other than potatoes is, however, increasingly concentrated in Ontario and Quebec, particularly in the former. The growth in the production of processing vegetables has taken place mostly in Ontario, although there was an increase in the Maritimes as well. While Ontario and Quebec still account for the bulk of the Canadian output of the four main muck soil vegetables, the increases in production since 1961-65 have accrued almost entirely to the three other regions.

During 1971-75, Canadian growers produced 3.9 billion pounds, or 49.9 per cent of total production,<sup>(1)</sup> for the fresh market, and 3.2 billion pounds, or 41.1 per cent, for processing (see Table 7). The volume produced and sold to processors has increased sharply from an annual average of 1.9 billion pounds during 1961-65, when it accounted for 26.2 per cent of total vegetable production. Fresh market sales actually declined; they amounted to 4.6 billion pounds per annum during 1961-65, or 62.9 per cent of all vegetables produced in Canada. With only a few exceptions, the volume grown for processing has increased and the volume produced for the fresh market has declined for each vegetable during the period under review. The main processing vegetables are still mostly processed, but more than before, about 90 per cent during 1971-75. Some 31 per cent of all potatoes were grown for processing in 1971-75 compared with 13 per cent in 1961-65. The four main muck soil vegetables are still mostly for the fresh market, but slightly less than in the past, 88 as against 90 per cent.

Table 7: Vegetables: Distribution of Production by End-Use, by Group,  
Annual Average, 1961-65 and 1971-75

	For the Fresh Market		For Processing		Fresh Market as Percentage of Total Production	
	1961-65	1971-75	1961-65	1971-75	1961-65	1971-75
	- '000 lb. -				- per cent -	
Potatoes <sup>(a)</sup>	3,201,639	2,667,182	598,488	1,516,841	84.3	63.7
Main processing vegetables	227,213	152,173	1,161,348	1,412,580	16.4	9.8
Main organic soil vegetables	570,143	610,572	64,553	87,168	89.8	87.5
Other vegetables	625,232	437,802	99,164	168,630	86.3	72.2
Total	4,624,227	3,868,269	1,923,553	3,185,219	70.6	54.8

(a) Excludes seed potatoes.

Source: Appendix Table 12.

(1) This includes exports which are assumed to be for the fresh market. The Board had no way of determining whether any exports of fresh vegetables were processed abroad; small volumes were probably processed, but the bulk is believed to be for the fresh market. Production for the fresh market and production for processing exclude the 692 million pounds of seed potato production, which are equal to 9 per cent of the total production.

FARM VALUE

The total farm value of all vegetables produced in Canada averaged \$295 million for the period 1971-75, \$135 million, or five-sixths more, than the \$160.4 million received in 1961-65 (see Table 8 and Appendix Table 13). Inasmuch as the volume of vegetable production has increased only moderately, it is apparent that the growth in the farm value of vegetables is due to the rapid increase in prices received by growers, especially during the 1970s. The farm value of vegetables rose only 8 per cent from 1961-65 to 1966-70. However, in 1975, it totalled \$417 million compared with \$169 million in 1971, an increase of \$248 million, or 147 per cent.

Table 8: Vegetables: Farm Value as a Percentage of Total  
Farm Cash Receipts<sup>(a)</sup> and of Farm Cash  
Receipts from Crops, 1961-65 to 1971-75

	Total Farm Cash Receipts	Total Farm Cash Receipts from Crops - \$ million	Total Farm Value Vegetables -	Farm Value of Vegetables as a Percentage of:	
				Total Farm Cash Receipts %	Total Farm Cash Receipts from Crops %
<u>Annual Average</u>					
1961-65	3,337.6	1,392.1	160.4	4.8	11.5
1966-70	4,317.3	1,681.5	172.6	4.0	10.3
1971-75	7,128.3	3,075.5	295.2	4.1	9.6
<u>Years</u>					
1971	4,564.2	1,753.2	168.7	3.7	9.6
1972	5,451.2	2,136.0	244.0	4.5	11.4
1973	6,840.2	2,672.7	355.6	5.2	13.3
1974	8,878.7	4,127.0	291.0	3.3	7.1
1975	9,907.3	4,688.6	416.7	4.2	8.9

(a) Total cash receipts including supplementary payments.

Source: Statistics Canada.

Vegetables are much more important to Canadian agriculture in terms of farm value than in terms of acres used. Vegetables represented less than 1 per cent of the acreage under all crops, but they equalled, in 1971-75, nearly 10 per cent of the farm cash receipts from all crops. Relative to farm cash receipts from all sources, vegetables comprise about 4 per cent.

The regional importance of vegetables as a cash crop varies greatly (Table 9). In 1974, it ranged from 23 per cent of the total farm cash receipts in the Maritimes to less than 1 per cent in the Prairies. As a percentage of cash receipts from crops only, the farm value of vegetables was equal to 53 per cent in the Maritimes but only 1.4 per cent in the Prairies. Vegetable production was the most important cash crop in Quebec, equal to 45 per cent of the cash receipts from all crops, while in the agriculturally more diversified regions of Ontario and British Columbia it was of moderate importance, 13 and 16 per cent respectively.



Table 9: Farm Value of Vegetables as a Percentage of Total Cash Receipts and Farm Cash Receipts from Crops, by Region, 1974

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- \$ million -					
Total Cash Receipts	288.9	1,173.9	2,460.4	4,572.7	382.8	8,878.7
Farm cash receipts						
from crops	123.5	119.8	850.5	2,904.8	128.4	4,127.0
Farm value of						
vegetables	65.6	54.0	111.1	39.6	20.7	291.0
	- per cent -					
Farm Value of						
Vegetables as a						
Percentage of						
Total farm cash						
receipts	22.7	4.6	4.5	0.9	5.4	3.3
Farm cash receipts						
from crops	53.1	45.1	13.1	1.4	16.1	7.1

Source: Statistics Canada.

Potatoes, not surprisingly, are, in terms of total farm value, again the most important vegetable; they accounted for an average of \$177 million in 1971-75 or about 60 per cent of the farm value for all vegetables. The importance of this vegetable, in value, has increased during the period under review (see Appendix Tables 13 and 14), because the average price to grower for potatoes has gone up more than the average received for all other vegetables combined. The farm value of the four main processing vegetables was equal to 20 per cent of the total; the four major muck soil vegetables and "other" vegetables for 10 per cent each. Excluding potatoes, the main processing vegetables comprised half of the total farm value of vegetables, and the other two groups each one-quarter. After potatoes, the individual vegetable with the second highest total farm value was tomatoes, with an average of \$30 million during 1971-75. Other vegetables rank well below this, the next largest being sweet corn, onions, and carrots, with \$13.5, \$11.1 and \$10.6 million respectively.

Regionally, Ontario growers received an average of \$109 million per year for the vegetables produced by them during 1971-75, or nearly 40 per cent of the Canadian total (see Appendix Tables 15 and 16). The first place ranking of Ontario is determined by its dominant position in the four main processing vegetables, especially tomatoes for which growers in this province received \$26.7 million. Potatoes were also an important cash crop in Ontario, even though its \$34.5 million farm value represented less than 20 per cent of the total Canadian cash receipts for this vegetable.

The Maritimes, almost exclusively the result of the farm value of its potato crop, averaged \$81.5 million for all vegetables during 1971-75, nearly 28 per cent of Canadian total. Potatoes accounted for 93 per cent of the regional total. Quebec ranked third in terms of the farm value of its vegetable production, with 17 per cent of the Canadian total. Potatoes, worth \$27 million at the farm-gate or 55 per cent of the

provincial total for all vegetables, was the most important crop. The Prairie region accounted for some 11 per cent of the total farm value for vegetables and as with the Maritimes, potatoes were by far the most important vegetable. The smallest share of the farm value of all vegetables produced in Canada goes to growers in British Columbia, namely an average of 7.3 per cent or \$22 million during 1971-75. The relative importance of the various groups of vegetables within this total was very similar to that for Quebec, potatoes contributing better than half of the total, the main processing vegetables and muck soil vegetables each somewhat more than 16 per cent, and the "other" vegetables around 11 to 12 per cent.

The average unit farm value for all vegetables, or the average farm-gate price received by the grower per pound sold or marketed, was 3.8 cents during 1971-75. For individual vegetables it ranged from 2.6 cents for sweet corn to 36.3 cents for asparagus. Potatoes averaged 3.6 cents during this period, the four main processing vegetables 3.8 cents, the four muck soil, largely fresh market vegetables, 4.2 cents, and all other vegetables 4.9 cents.

Perhaps the most outstanding development in the Canadian vegetable growing industry in recent years has been the sharp rise in average unit farm values, or prices to growers. This phenomenon has been at least continental in scope, and has thus also been noticeable in the f.o.b. values of imported fresh vegetables. As mentioned at great length at the public sittings, and referred to in the letter of reference for this study, the increase in produce prices was instrumental in eroding the level of protection provided by the specific duty on imports of most vegetables.

Average unit farm values of vegetables produced in Canada increased during the period under review, especially during the 1970s. For all vegetables, the farm value per pound during 1961-65 was 2.2 cents. However, during 1971-75, it averaged 3.8 cents, or 73 per cent higher than in the previous period (see Appendix Table 17). Between 1971 and 1975 alone the average farm value rose by 136 per cent.

The farm-gate price for all vegetables rose moderately during the sixties, comparing the average for 1966-70 with that for 1961-65, with the exception of potatoes, for which it actually dropped. Unit farm values increased at an accelerating pace for each vegetable during the 1970s. Comparing the average unit farm value for 1971-75 with that for 1961-65 the increase was the smallest for the four main processing vegetables, 52 per cent, and was the greatest for potatoes, 80 per cent, closely followed by the four main muck soil vegetables, 68 per cent, and "other" vegetables (excluding turnips), with 69.7 per cent. Thus it would appear that during the entire period under review the cost to processors for processing vegetables increased less than the cost to the consumer for fresh market vegetables. During the years 1971 to 1975 it was, however, the processing vegetables which, on the whole, experienced the more rapid increase in average unit values at the farm level (see also Appendix Table 17).

The farm value per pound, or the farm-gate price received by the vegetable grower, is determined by a number of factors. Changes upwards or downwards, however, have been least affected by fluctuations in consumer demand; consumption from year to year has essentially been determined by the growth in population, since per capita consumption has, at least during the period under review, increased little. Prices to the grower are, of course, very much influenced by sudden changes in supply; the domestic supply of a vegetable can change quite drastically as a result of either good or bad weather conditions. This can be a local occurrence, with only local price effects which may not be discernable in the average farm values for a province or region, or can affect Canada as a whole. However, when a major source of supply in Canada is affected by unusual climatic conditions and such conditions are accompanied by similar, and not offsetting, conditions in a major growing region in the United States, then substantive changes in unit farm values are discernable both throughout Canada and the United States; the increase in the average unit value of potatoes in 1972-73 and the decline in 1973-74 are examples. The unfavourable weather conditions throughout eastern Canada and the north-eastern United States explains to a large extent the sharp rise in the unit farm values for most vegetables from 1971 to 1972.

Table 10: Vegetables: Unit Farm Values by Group, Annual Average;  
1961-65, 1966-70, 1971-75

	<u>Average</u> <u>1961-65</u>	<u>Average</u> <u>1966-70</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>Average</u> <u>1971-75</u>
	- ¢ lb. -							
Potatoes	2.0	1.8	1.7	3.4	5.2	2.9	5.2	3.6
Main processing vegetables	2.5	2.9	2.8	2.9	3.2	4.6	5.2	3.8
Muck soil vegetables	2.5	2.8	3.0	4.6	4.2	4.4	4.6	4.2
Other vegetables	2.2	3.2	3.5	4.6	4.7	5.2	6.1	4.9
Total vegetables	2.2	2.2	2.2	3.5	4.6	3.5	5.2	3.8

Source: Appendix Table 17.

Weather, and weather-caused changes in the supply of vegetables, and consequent changes in grower prices tend to offset each other. The upward movement in the average unit farm value for vegetables throughout the period under review, therefore, does not reflect weather conditions, but other longer term considerations. It is clear that the availability of land, with vegetables using less than 1 per cent of the land under crops in Canada, as well as in the United States, was not a significant factor in this respect. It would appear that the rapidly rising prices of produce reflect primarily increases in costs of production.<sup>(1)</sup>

(1) Costs of production will be discussed more fully in a later section of this chapter.

Differences in unit farm values between various vegetables reflect the relative importance of a number of cost factors. Labour costs are an important factor in determining total production costs and, as a result, a mechanically harvested crop will tend to have lower unit values than a manually harvested crop, for example, an average unit value in 1971-75 of 2.5 cents per pound for Ontario carrots versus 9.1 cents per pound for Ontario lettuce, and corn for processing at an average unit value of 1.7 cents per pound as opposed to corn-on-the-cob for the fresh market at 6.2 cents. Yields are an important element in determining differences in unit farm values between vegetables. High-yielding mechanically harvested crops will normally have a lower unit farm cost and value than lower yielding mechanically harvested crops; for example, 1.7 cents per pound for processing corn versus 4.5 cents per pound for processing snap beans. The same will also be true for manually harvested crops, 5.1 cents per pound for higher yielding celery versus 7.2 cents per pound for lower yielding lettuce. Another important factor in determining unit costs is land values. Onions, which are mechanically harvested and have high yields, had a unit value of 5.4 cents per pound, while potatoes which also have high yields and are mechanically harvested but are grown on less costly soils had a unit value of 3.6 cents per pound during 1971-75.

The average unit farm value of vegetables also varies substantially from one region to another (see Appendix Table 18). For all vegetables the average for 1971-75 was lowest in the Maritimes, 3.4 cents, and highest in British Columbia, 5.4 cents per pound. However, the figure for the Maritimes is almost entirely determined by the unit farm value for potatoes, which compared to other regions is, indeed, lowest in the Maritimes. Excluding potatoes, Ontario and Quebec had the lowest overall average unit farm value, 3.8 and 3.9 cents; the Maritimes comes next followed by the Prairies and British Columbia, with 4.7, 5.3 and 6.5 cents per pound respectively. Unit farm values in Quebec for individual vegetables are, however, more often than not lower than in Ontario. Only with respect to tomatoes, sweet corn, carrots, and turnips, which are relatively important in Ontario, were average unit farm values in this province lower than in Quebec. For most individual vegetables, growers in the other three regions realize average prices well above those in Quebec and Ontario. With respect to British Columbia it should be noted that growers in this province, more so than in any other province, are well-organized and market the bulk of their produce through producer's marketing boards or sales agencies. This has probably contributed to the high average unit farm value in that province. In comparison, there is little organization of this kind in the Quebec vegetable growing industry.

On the assumption that differences in unit farm values in the long run are indicative of regional differences in unit costs of producing vegetables, it would appear that growers in British Columbia experience the highest costs and those in Quebec and Ontario the lowest. Evidence gathered by the Board, with respect to individual fresh vegetables, indicates that this is so. The regional aspects of production costs are discussed later in this chapter and also in the individual commodity reports published in Part II of this volume of the report.

Vegetables on average yield much more in volume terms per acre than do most other crops. However, as they constitute a much more intensive and costly form of land use, especially with respect to fresh market production, vegetables also realize higher farm prices. These two factors combined indicate that the average farm value of vegetables produced per acre is very high. This is confirmed in Table 11, and Appendix Table 19.

Table 11: Average Farm Value per Acre, Vegetables and Other Crops: 1961-65, 1966-70, 1971-74

				Percentage Change		
Average Farm Value				1961-65 to 1966-70	1966-70 to 1971-75	1961-65 to 1971-75 <sup>(a)</sup>
<u>1961-65</u> <u>1966-70</u> <u>1971-75</u> <sup>(a)</sup>				<u>1966-70</u>	<u>1971-75</u>	<u>1971-75</u>
- \$ per acre -				- per cent -		
<u>Vegetables</u>						
Mainly for						
<u>Fresh Market</u>						
Organic soil						
vegetables	558.1	668.7	960.8	+19.8	+ 43.7	+ 72.2
"Other"						
vegetables	353.1	522.8	778.5	+48.1	+ 48.9	+120.5
Mainly for						
<u>Processing</u>						
Potatoes	323.6	297.9	674.0	- 7.9	+126.3	+108.3
Main processing						
vegetables	211.9	243.8	334.7	+15.1	+ 37.3	+ 58.0
All Fresh						
<u>Vegetables</u>	303.7	316.5	580.6	+ 4.2	+ 83.4	+ 91.2
<u>Other Crops</u>						
Sugar-beets	215.6	229.1	420.5	+ 6.3	+ 83.5	+ 95.0
Dry beans	95.1	99.9	201.6	+ 5.0	+101.8	+112.0
Grain corn	98.0	109.3	165.0	+11.5	+ 51.0	+ 68.4
Soybeans	75.2	77.7	143.3	+ 3.3	+ 84.4	+ 90.6
Dry peas	42.4	43.7	88.7	+ 3.1	+103.0	+109.2
Wheat	34.4	36.5	74.2	+ 6.1	+103.3	+115.7

(a) 1971-74 for "Other Crops."

Source: Appendix Table 19 and Statistics Canada data.

The gross return per acre for all vegetables in 1971-75 averaged \$581. For the four main muck soil vegetables, largely for the fresh market, the average farm value produced per acre was \$961. For potatoes it totalled \$674. For the four main processing vegetables it averaged \$335, although for tomatoes alone it averaged \$1,057. Farm



value per acre during 1971-75 ranged from a low of \$186 per acre for peas to \$2,225 for celery. The value of production per acre, reflecting rapid growth in unit farm values, and production costs, has increased greatly during the period under review. It is also evident from Table 11 that the value produced per acre of vegetables is generally much higher than for other cash crops.

Regionally, the differences in gross return per acre between vegetables and other cash crops are very similar (see Appendix Table 20). With respect to the Maritimes in particular the data appear to substantiate the predominant position of potatoes relative to other land uses possible in that region, such as grains, silage corn and hay. It is evident that the value of vegetable production per acre is lowest in Quebec, a combination of low farm-gate prices and low yields, and is highest in British Columbia, where both prices received and yields are relatively high.

### FOREIGN TRADE

Lacking year-round domestic supplies of most vegetables, Canada is a large importer of fresh vegetables. This is particularly the case for highly perishable and non-storable vegetables such as lettuce and celery, of which Canadian-grown supplies are available for a few months only. However, Canada also imports substantial volumes of storable vegetables. Few of these can be stored the entire period until the next crop is harvested, and, furthermore, Canadian consumers have shown an increasing preference for the fresh field-grown product rather than the domestic product out of storage. In addition there are also extensive imports during the main Canadian production marketing season.

On the export side, the Canadian climate is particularly suitable for a number of cool-weather vegetables, e.g., turnips, which gives Canadian growers an advantage in export markets. For some other vegetables a high level of growing efficiency has resulted in export sales. Fresh exports are, however, confined to a small number of vegetables, and Canada's balance of trade, both in volume and value terms, favours imports by a wide margin.

### Imports

In considering imports, and the level of import penetration of the domestic market the Board included not only fresh imports, whether for fresh market use or for processing, but also the fresh equivalent weight of processed imports. It is assumed that imports of vegetables in the processed form could have been grown and processed in Canada.



## Fresh Vegetables

Canada imported 1.7 billion pounds of fresh vegetables in 1975 (Table 12). For the period 1971-75 imports of fresh vegetables averaged 1.5 billion pounds per year, compared to an average of 1.0 billion pounds in 1961-65. Imports, thus, increased by some 50 per cent, much more rapidly than domestic production which expanded by less than 6 per cent. As a result imports as a proportion of production rose from 13 per cent during 1961-65 to 20 per cent during 1971-75. The growth in fresh vegetable imports is largely a phenomenon of the 1970s. Although there was virtually no growth from 1961 to 1965, the volume of imports rose by 20 per cent between 1965 and 1971, and then by 39 per cent from 1971 to 1975. Imports of non-storable vegetables are much larger than imports of storable vegetables and have, moreover, increased more rapidly during the period under study.

Table 12: Vegetables: Imports of Fresh Vegetables Including Minor Vegetables<sup>(a)</sup> Volume and Value, Annual Average: 1961-65 and 1971-74

	Average <u>1961-65</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	Average <u>1971-75</u>
- million lb. -							
Volume							
Total imports	982.9	1,235.7	1,434.5	1,494.8	1,640.5	1,723.6	1,506.6
Storable							
vegetables	384.8	443.3	546.5	539.6	638.9	666.1	567.7
Non-storable							
vegetables	598.1	792.4	888.0	955.2	1,001.6	1,057.5	938.9
- \$ million -							
Value							
Total imports	53.8	95.9	118.4	139.8	157.3	186.2	139.6
Storable							
vegetables	14.0	18.1	31.1	33.0	40.8	46.3	33.9
Non-storable							
vegetables	39.8	77.8	87.3	106.8	116.5	139.9	105.7

(a) Excludes seed potatoes.

Source: Appendix Tables 21,22 and Statistics Canada data.

In line with the preceding sections of this chapter, subsequent references to the volume and value of fresh vegetable imports, unless otherwise indicated, are confined to the 17 major vegetables. Imports of the 17 major vegetables totalled 1.4 billion pounds annually during 1971-75, and accounted for the bulk, 91 per cent, of total fresh imports of all vegetables. Imports of the minor vegetables averaged 130 million pounds. It should be noted that fresh imports of these minor vegetables averaged only 34 million pounds, or 3.5 per cent of all fresh vegetable imports in 1961-65, and that they have expanded more rapidly than the fresh imports of the 17 major vegetables.

The total value of all fresh imports was equal to \$139.6 million in the period 1971-75, an increase of \$87.8 million or 159 per cent over the \$53.8 million average of 1961-65. The value of imports rose by much more than the volume, because import prices have increased sharply. Moreover, inasmuch as both the volume growth and higher import prices occurred mostly since 1971, the total value also increased the most during this period. From 1971 to 1975 the value of fresh vegetable imports increased from \$95.9 million to \$139.6 million. As in volume terms, the value of non-storable imports of fresh vegetables, an average of \$105.7 million in 1971-75, was much greater than the value of storable vegetables, \$33.9 million.

The value of fresh imports as a proportion of the total Canadian farm value of the 17 major fresh vegetables increased from 34 per cent, for the period 1961-65, to 47 per cent, for 1971-75. However, these proportions present a somewhat distorted picture of the role of imports in the Canadian market. Imports are for the most part trimmed, packaged, etc., and represent vegetables that are basically in the form in which they will be sold. Further, the value of these imports includes the cost of packaging, trimming and other improvements made. As such, the volume of imports as a proportion of total Canadian production is underestimated because the Canadian data refer largely to the volume before trimming and culling. In the same way, the value of imports as a proportion of value of Canadian production is over-estimated because the Canadian data refer to the value of production at the farm-gate and do not take into account the "packaging factor."

The bulk of fresh vegetable imports are for fresh market consumption; during 1971-75, only about 145 million pounds or 10 per cent were imported for processing. Imports for processing have increased very sharply since 1961-65, when they amounted to 46 million pounds or 5 per cent of total fresh imports. The major factor in both the level and expansion of such imports was potatoes; potatoes for processing averaged 124 million pounds during 1971-75. The increase in total fresh potato imports during the period under review was due entirely to higher imports for processing, not for the fresh market.

Fresh market imports have contributed most to the increase in total fresh vegetable imports. Lettuce, tomatoes, celery, all non-storable, highly perishable vegetables, are very prominent. Therefore, it is not surprising that imports of non-storable vegetables accounted for most of total fresh imports, 62 per cent or 939 million pounds, and have been the major factor in the total growth. With respect to fresh market imports of storable vegetables, potatoes, cabbage and onions are the largest. The much higher level of imports of non-storable vegetables, compared to storable vegetables, is due to the shorter periods when domestic supplies are available. The growth of these imports reflects, in addition to an increase in in-season penetration of the domestic market, such factors as the greater affluence of Canadian consumers which has boosted purchases of out-of-season premium-priced imported fresh produce. Similar factors explain the expansion in imports of storable vegetables; Canadian consumers increasingly purchase the imported fresh product rather than the home-grown product out of storage.

Non-Competing Imports<sup>(1)</sup> - For the 17 major vegetables, the volume of non-competing fresh imports is estimated to have averaged 576.2 million pounds for the period 1971-75 (Table 13). In addition the Board estimates that non-competing imports of the minor vegetables during this period was 100 million pounds. Total non-competing imports amounted to 676.6 million pounds. Therefore, out of total imports of fresh vegetables of 1.5 billion pounds, about 45 per cent entered Canada when domestically grown produce was largely unavailable, and was deemed not to have displaced Canadian production. Non-competing imports of fresh vegetables were valued at an average of \$67.2 million, an increase of 141 per cent from the 1961-65 average of \$27.9 million.

Table 13: Vegetables: Non-Competing Imports of Fresh Vegetables, Annual Average: 1961-65, 1966-70 and 1971-75

	Average			% Change
	1961-65	1966-70	1971-75	1961-65 to 1971-75
	- '000 lb. -			%
<u>Volume (17 Major Vegetables)</u>				
Potatoes <sup>(a)</sup>	-	-	-	-
Main processing vegetables	78,549	93,908	111,826	+ 42.4
Main organic soil vegetables	269,235	327,189	380,440	+ 41.3
Other vegetables	56,968	64,036	83,937	+ 47.3
Total	404,752	485,133	576,203	+ 42.4
<u>Volume (All Vegetables)</u>	444,122	553,993	676,636	+ 52.4
17 major vegetables <sup>(a)</sup>	404,752	485,133	576,203	+ 42.3
Other vegetables	39,370	68,860	100,433	+155.1
	- \$000 -			
<u>Value (17 Major Vegetables)</u>				
Potatoes <sup>(a)</sup>	-	-	-	-
Main processing vegetables	6,751	10,134	16,288	+141.3
Main organic soil vegetables	12,620	18,168	26,934	+113.4
Other vegetables	4,534	5,269	8,578	+ 89.2
Total	23,905	33,571	51,800	+116.7
<u>Value (All Vegetables)</u>	27,917	41,908	67,217	+140.8
17 major vegetables <sup>(a)</sup>	23,905	33,571	51,800	+116.7
Other vegetables	4,012	8,337	15,417	+284.3

(a) Excludes seed potatoes.

Source: Appendix Tables 23, 24 and Statistics Canada data.

(1) See Chapter I for definitions of "competing" and "non-competing."

Non-competitive imports increased by 233 million pounds or 52 per cent from 1961-65 to 1971-75, roughly the same as the increase in total fresh vegetable imports. The growth in non-competitive imports was greatest for the minor vegetables which more than doubled from 1961-65 to 1971-75. They accounted for over a quarter, 61 million pounds, of the total increase in non-competing imports. Virtually all of these non-competitive imports are believed to be for fresh consumption.

Three vegetables, tomatoes, celery, and lettuce, the basic salad vegetables, accounted for 427.3 million pounds or 63.2 per cent of all non-competitive imports in 1971-75 (Appendix Table 23). These three vegetables accounted for close to half of the increase in non-competitive imports. Improved transportation systems, resulting in greater out-of-season availability of higher quality imported produce, the short Canadian growing season, and the fact that there is little or no processing of lettuce and celery, underlies the importance and growth in out-of-season imports of these three vegetables.

Competitive Imports - Competitive imports of fresh vegetables are almost entirely restricted to the 17 major vegetables. Competitive imports of the minor vegetables amounted, on average, to 30 million pounds or \$4.9 million in 1971-75, or 4 and 7 per cent respectively of total competitive imports of all vegetables. Tariff Board estimates place the average Canadian production of the minor vegetables in the order of 130 million pounds for the period 1971-75 so that competing imports of these vegetables would appear to be equal to approximately 23 per cent of Canadian production.

Table 14: Vegetables: Fresh Competing Imports of Fresh Vegetables; Average 1961-65, 1966-70 and 1971-75

	1961-65	Average 1966-70	1971-75	% Change 1961-65 to 1971-75
		- '000 lb. -		%
<u>Volume (17 Major Vegetables)</u>				
Potatoes(a)	174,533	207,253	291,571	+ 67.1
Main processing vegetables	119,036	140,406	158,300	+ 33.0
Main organic soil vegetables	163,135	194,307	233,705	+ 43.3
Other vegetables	<u>72,530</u>	<u>86,883</u>	<u>116,782</u>	+ 61.0
Total	529,234	628,849	800,358	+ 51.2
<u>Volume (All Vegetables)</u>	538,749	646,503	829,960	+ 54.1
17 major vegetables(a)	529,234	628,849	800,358	+ 51.2
Other vegetables	9,515 (b)	17,654	29,602	+211.1
<u>Value (17 Major Vegetables)</u>		- \$000 -		
Potatoes(a)	5,649	6,764	15,971	+182.7
Main processing vegetables	10,149	14,494	23,606	+132.6
Main organic soil vegetables	6,896	9,567	17,699	+156.7
Other vegetables	<u>3,369</u>	<u>5,851</u>	<u>10,194</u>	+202.6
Total	26,063	36,676	67,470	+158.9
<u>Value (All Vegetables)</u>	27,187	39,165	72,394	+166.3
17 major vegetable(a)	26,063	36,676	67,470	+158.9
Other vegetables	1,124 (b)	2,489	4,924	+338.1

(a) Excludes seed potatoes.

(b) Tariff Board estimate.

Source: Appendix Tables 25, 29 and Statistics Canada data.

Competing imports of the 17 major vegetables are estimated to have averaged 800 million pounds per annum during 1971-75 or about 53 per cent of total fresh imports. Competing imports increased by 271 million pounds, or 51.2 per cent, over the 529 million pounds imported during the period 1961-65 (Table 14). Storable vegetables accounted for 496 million pounds, or 62 per cent, of all competing imports. The value of competing imports of fresh vegetables averaged \$67.5 million during 1971-75, an increase of 159 per cent over the average of \$26.1 million imported in 1961-65. Competing imports in volume, but especially in value, expanded most rapidly during the 1970s.

Competing imports of potatoes totalled 292 million pounds, 59 per cent, of such imports of storable vegetables and 37 per cent of in-season imports of all vegetables. Moreover, the increase in competing imports of potatoes, 117 million pounds, accounted for 43 per cent of the overall growth in competitive imports during the period under review. Tomatoes rank next to potatoes in terms of volume of competing fresh imports, 145 million pounds during 1971-75, followed by lettuce, onions, cabbage, carrots, and cucumbers. The volume of in-season imports has increased for all major vegetables except carrots; import growth was greatest for lettuce, followed by cabbage and tomatoes.

The bulk of competing imports, 618 million pounds or 77 per cent, is for the fresh market. Fresh imports for processing amounted to an estimated 145 million pounds during 1971-75.<sup>(1)</sup> It is noteworthy, however, that imports for processing have increased at a much more rapid pace than fresh market imports. Almost the entire growth in processing imports was accounted for by potatoes, which averaged 124 million pounds during 1971-75 compared with 30 million pounds in 1961-65. The remainder of imports for processing are largely composed of snap beans, onions, asparagus, and cucumbers; but the import volumes are small. Imports of cucumbers for processing have declined significantly.

Competing imports of the major vegetables were equivalent to approximately 10 per cent of the average Canadian production during 1971-74 (Table 15). This percentage was 7.2 per cent for the period 1961-65, so that quite clearly in-season imports have increased more rapidly than domestic vegetable production, and Canadian growers have lost ground. On the other hand, this means that, overall, Canada still meets 90 per cent of all its current in-season requirements of vegetables, although this level of self-sufficiency has declined somewhat during the period under review.

(1) These fresh imports for processing are considered to be competing imports, although actually not all are strictly competing; some imports for processing have been granted remission of duties on the ground that such supplies were not available domestically.

Table 15: Vegetables: Competing Imports of Fresh Vegetables as a Percentage of Canadian Production, Annual Average 1961-65, 1966-70 and 1971-74

Imports (b)	(a) Imports for Processing		Imports for Fresh Market		Total Imports	
	1961-65	1971-74	1961-65	1971-74	1961-65	1971-74
			- '000 lb. -			
Potatoes	30,186	123,870	144,347	149,700	174,533	207,253
Main processing vegetables	1,356	4,122	117,778	153,194	119,036	140,406
Main organic soil vegetables	952	3,919	162,183	215,569	163,135	194,307
Other vegetables	13,091	12,781	58,975	99,505	72,530	86,883
Total	45,585	144,692	483,283	617,968	529,234	628,849
			(c)			
Imports as a Percentage of:	Production		Fresh Market Production		Total Production	
	for Processing					
Potatoes (b)	5.0	8.2	4.5	5.6	4.6	6.0
Main processing vegetables	0.1	0.3	51.8	101.0	8.6	9.9
Main organic soil vegetables	1.5	4.3	28.4	37.7	25.7	29.5
Other vegetables	13.2	7.8	9.4	23.0	10.0	13.2
All vegetables	2.4	4.6	10.5	16.1	7.2	7.9

(a) Imports for processing are for full crop year.

(b) Excludes seed potatoes.

(c) Field production only.

Source: Appendix Tables 26 and 27.



Self-sufficiency varied from more than 99 per cent for peas to less than 50 per cent for lettuce and asparagus. Competing imports of potatoes were equal to 6.0 per cent of Canadian production, a relatively low level of import competition. In fact, excluding potatoes, in-season imports of the other vegetables equalled 17.7 per cent of production. For the four main processing vegetables, the combined level of import penetration during 1971-74 was equal to 10.1 per cent, a level very much influenced by the 18.0 per cent for tomatoes, which were entirely for the fresh market and not for processing. For vegetables other than potatoes, the four main processing vegetables and turnips, competing imports equalled an average 31.7 per cent of Canadian output, nearly a third.

Competing imports expanded more rapidly than production for each of the major vegetables with the exception of cucumbers and carrots; the increase in import penetration, thus, appears to have been widespread. Canadian growers seem to have lost ground most with respect to asparagus, parsnips and spinach. For potatoes, imports as a percentage of production rose from 4.6 to 6.0 per cent, for the main processing vegetables from 8.6 to 10.1 per cent, and for the four main muck soil vegetables from 25.7 to 33.5 per cent.

The level of import penetration is much higher with respect to fresh market vegetables than with respect to vegetables for processing, 16.1 per cent as against 4.6 per cent in 1971-74. Clearly, Canadian growers meet nearly all of the processing requirements of Canadian processors, even though imports have expanded their small share substantially. The very high level of self-sufficiency for processing vegetables is, of course, not surprising, because long-distance haulage is precluded by high transport costs as well as, in some instances, by perishability.

For potatoes, the level of import competition is higher with respect to processing than fresh market use, 8.2 per cent as against 5.6 per cent, a situation quite contrary to all other vegetables. It can be seen in Table 15 that for the main processing vegetables, Canadian growers supply virtually all domestic requirements for processing but only half of the fresh market requirements. Moreover, imports of these four vegetables for the fresh market have relatively doubled in importance. For the four main muck soil vegetables, Canadian requirements for processing are also almost entirely supplied by Canadian growers, while imports of these vegetables for the fresh market accounted for 37.7 per cent of domestic production.

The level of imports relative to production, quite understandably, varies sharply during the course of the period when Canadian supplies are available. A high level of self-sufficiency with respect to fresh market requirements during peak production is accompanied by much lower levels during the "shoulder" months at the beginning and the end of the season. The Board's reviews of the individual fresh vegetables indicate that imports have made inroads into the fresh market in these shoulder months generally for all of the major vegetables during the period under study. Furthermore, more often than not, this also occurred for the peak production period, although the levels of import competition were usually low.

A question of particular interest is the number of acres that would be required to produce the volume of competing fresh imports. Based on average Canadian yields, in 1971-75, it would require 47,000 additional acres to grow enough fresh vegetables to displace competing imports (Table 17). This additional requirement represents only 0.7 per cent of the total acreage presently under crops in Canada, so that, in general, the availability of land should not present any difficulties. However, another 13,000 acres would be required for the four main muck soil vegetables. Finding this additional acreage of organic or muck soils, in the right place, given present cost-price relationships, could be more difficult; however, some of these muck soil vegetables can be grown on mineral soils, albeit with some loss in productivity. A much more serious problem than availability of land is that the additional production for the fresh market would mostly be required during the early part of the season, and to some extent also towards its end. At these times the risks and production costs can be expected to be higher than during the peak production period.

### Processed Imports

While Canadian growers supply more than 95 per cent of all vegetables processed domestically, this domestic production does not nearly account for total processed consumption. During 1971-75 Canada imported an average of 520 million pounds per year of vegetables in the processed form, (Table 16). This was equivalent to 16.3 per cent of total Canadian output of processing vegetables, and 6.7 per cent of total vegetable production.

Table 16: Vegetables: Processed Imports by Vegetable Group, Average 1961-65 and 1971-75

	<u>Processed Imports<sup>(a)</sup></u>		<u>Processed Imports as % of Production for Processing</u>		<u>Processed Imports as % of Total Production</u>	
	<u>1961-65</u>	<u>1971-75</u>	<u>1961-65</u>	<u>1971-75</u>	<u>1961-65</u>	<u>1971-75</u>
	- '000 lb. -		- per cent -			
Potatoes	72,659	65,770	12.1	4.3	1.6	1.4
Main processing vegetables	191,759	420,437	16.5	29.8	13.8	26.9
Main organic soil vegetables	2,273	22,548	3.2	25.9	0.4	3.2
Other vegetables	9,520	10,507	9.7	6.3	1.3	1.7
Total	276,211	519,262	14.4	16.3	3.8	6.7

(a) Processed imports converted to fresh equivalent weight.

Source: Appendix Tables 30 and 31.

Imports of processed vegetables, in fresh equivalent weight, rose by 88 per cent from the 1961-65 level, and thus have expanded more rapidly than domestic production, both of processing vegetables and of all vegetables. The equivalent proportion of domestic production that was imported rose from 14.4 per cent during 1961-65 to 16.3 per cent in 1971-75 in terms of processing vegetables, and from 3.8 to 6.7 per cent for all vegetables.

Processed imports are by far the greatest and most significant for tomatoes. The volume of such imports rose from 187 million pounds, or 28 per cent of domestic production of tomatoes for processing in 1961-65, to 411 million pounds or 56 per cent during 1971-75. Although processed imports of corn, snap beans and peas have also increased relative to domestic production, particularly in recent years, such imports are much smaller, (see Appendix Table 31), therefore the figures for the four main processing vegetables in Table 16 reflect primarily the situation with respect to tomatoes.

Of the four main organic soil vegetables, processed imports are significant only for carrots, and such imports have increased to where they are equal to more than a quarter of total production of carrots for processing in 1971-75 and to 6.0 per cent of total carrot production. Processed imports are also relatively large in the case of asparagus and spinach and have grown more rapidly than domestic processing, especially for the latter. Imports of processed potatoes and cucumbers have declined during the period under review.

The additional acreage required to produce the fresh equivalent weight of these processed imports, at average Canadian yields for 1971-75, is estimated at 22,368 acres (Table 17). The bulk of this, 16,257 acres, is accounted for by the four main processing vegetables, of which tomatoes alone would require 14,234 acres.

The additional tomato acreage would presumably have to be found in southern Ontario, where the bulk of Canadian tomato processing is at present located. However, it would comprise less than 1 per cent of the total acreage under crops in that area. There would appear to be no problem with respect to land availability for the additional acreage for the other vegetables. Also, vegetables for processing can be grown during the optimum growing period.

#### Total Imports

Total fresh and processed imports of the 17 major vegetables amounted to an average of 1.9 billion pounds per annum during 1971-75. This was 56 per cent more than the 1.2 billion pounds imported in 1961-65. During the more recent period, two vegetables, potatoes and tomatoes, represented 52 per cent of the total imports; tomatoes alone accounted for 33 per cent of the imports (Appendix Table 32). In short, seven of the major vegetables, celery, onions, lettuce, carrots, cabbage, and the two mentioned above, account for more than 90 per cent of the total.

Table 17: Vegetables: Additional Domestic Acreage Required to Displace Competing Fresh Imports and Processed Imports, Annual Average; 1971-75

	Average Domestic Acreage	Acreage Required to Produce (a)		Total Fresh Competing & Processed	Required Acreage as a % of Average Domestic Acreage
		Acreage Competing Fresh Imports	Processed Imports (b)		
		- acres -			%
Potatoes	263,220	15,738	3,550	19,288	7.3
Main processing vegetables	177,250	7,350	16,257	23,607	13.3
Main organic soil vegetables	30,339	12,885	930	13,815	45.5
Other vegetables	37,619	11,057	1,631	12,688	33.7
Total	508,428	47,030	22,638	69,398	13.6

(a) Based on average Canadian yields.

(b) Processed imports converted to fresh equivalent weight.

Source: Appendix Table 28.

Competing imports, comprising in-season fresh imports and the fresh equivalent weight of all processed imports, totalled 1.3 billion pounds per year, during 1971-75. Such imports were equivalent to 17 per cent of the 7.7 billion pounds produced domestically, 34 per cent if potatoes are excluded. During 1961-65, competing imports, as a percentage of production, equalled 11 per cent of total domestic production, and 20 per cent excluding potatoes.

Obviously, Canadian vegetable production increased much more slowly than did competing imports and domestic consumption of vegetables. This higher growth rate for imports occurred for each of the major vegetables with the exception of cucumbers for which imports declined both absolutely and relatively. The overall position of vegetable growers appears to be weakest for asparagus, lettuce, spinach and tomatoes. Canadian growers withstood import competition best with respect to turnips, peas, corn, snap beans, beets and potatoes.

#### Source of Imports

The United States is by far the largest foreign supplier of fresh vegetables to Canada. Canadian fresh vegetable imports from that country averaged 1.3 billion pounds per year or 93 per cent of all such imports during 1971-75. Mexico was the other large supplier of Canada's imports during the same period, accounting for over 80 million pounds or 6 per cent of Canadian imports, of which nearly three-quarters were tomatoes. Imports from other countries, of which the bulk was dry onions, comprised less than 1 per cent of Canadian fresh vegetable imports. Given that most fresh vegetables are highly perishable and expensive to transport, it is not surprising that trade in these commodities is almost entirely confined to North America.

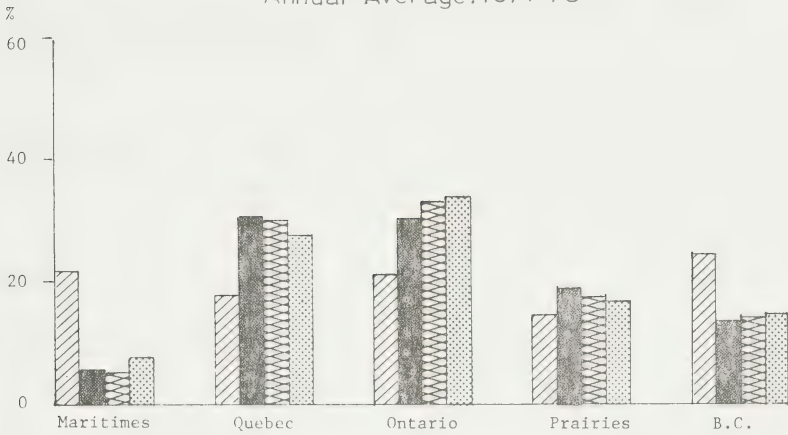
Canada is the major market for U.S. exports of fresh vegetables. During 1971-75, the United States exported 1.3 billion pounds, or 89 per cent of its exports of fresh vegetables, to Canada. Exports to Canada of fresh vegetables accounted, however, for less than 2 per cent of total vegetable production in the United States in recent years. Clearly the Canadian market is only a minor element in total sales by U.S. vegetable growers.

#### Distribution of Imports

Ontario was the largest importer of fresh vegetables during 1971-75, accounting for 30.1 per cent of the Canadian total. Like all regions Ontario imported more during the relevant period but its imports expanded at a slower rate than did those for other regions, and hence, its share of total fresh vegetable imports declined from an average of 33.2 per cent in 1966-70 (Table 18 and Chart VII). The decline in the position of this province as an importer was evident for each of the four groups of vegetables, but especially for potatoes, of which it imported 30.2 per cent of the Canadian total during 1966-70 and only 21.3 per cent during 1971-75.

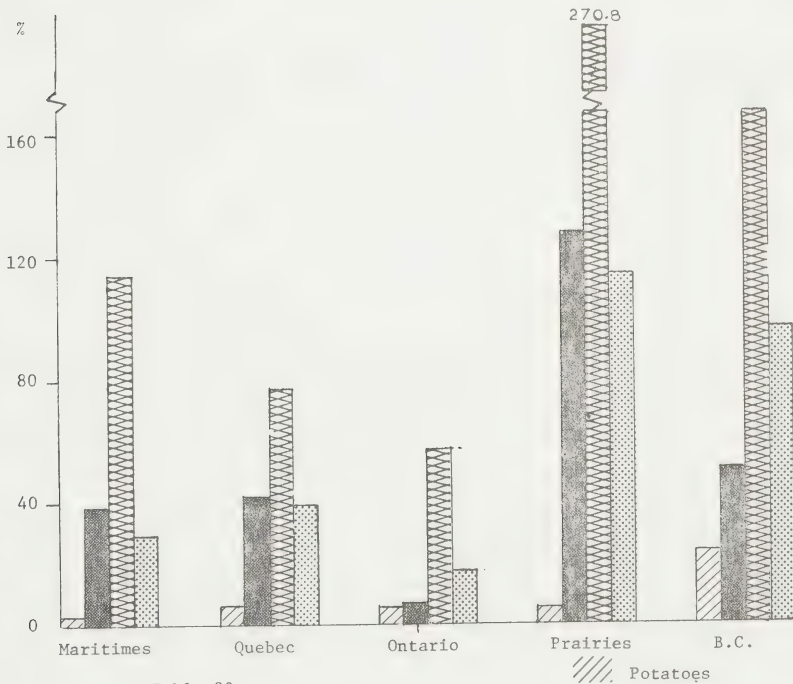


Chart VII  
Vegetables: Distribution of Fresh Imports,  
by Region,  
Annual Average:1971-75







Source: Table 18.

Chart VIII  
Vegetables: Fresh Imports, as a  
Percentage of Production,  
by Region,  
Annual Average: 1971-75



Source: Table 20.

 Potatoes  
 Processing Vegetables  
 Organic Soil Vegetables  
 Other Vegetables



Quebec accounted on average for 27.6 per cent of Canadian fresh vegetable imports, a proportion which has not changed significantly from 1966-70. This province ranks second as an importer of fresh vegetables. The Prairies, the third largest importer of vegetables diminished its share of total fresh vegetable imports; this was entirely the result of a substantial relative decline in potato imports, subsequent to the expansion of its own potato crop. This region became a more important importer of all other vegetables.

British Columbia's share of Canadian fresh vegetable imports has increased from 14.8 per cent to 15.8 per cent. Moreover, for each group of vegetables its share increased, i.e., for each group, imports into this province have increased at a more rapid pace than the Canadian total.

Table 18: Vegetables: Distribution of Fresh Imports by Region, Annual Average; 1966-70 and 1971-75

	<u>Period</u>	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- per cent -						
Potatoes <sup>(a)</sup>	1966-70	7.0	16.8	30.2	23.0	23.1	100.0
	1971-75	21.9	17.9	21.3	16.4	22.5	100.0
Main processing vegetables	1966-70	5.1	34.4	31.3	16.7	12.5	100.0
	1971-75	5.9	31.4	30.3	18.7	13.7	100.0
Main organic soil vegetables	1966-70	5.5	30.6	33.7	17.2	12.9	100.0
	1971-75	5.3	30.3	32.7	17.7	14.0	100.0
Other vegetables	1966-70	7.9	24.4	38.9	15.8	13.1	100.0
	1971-75	7.7	27.4	33.8	16.6	14.5	100.0
Total	1966-70	6.0	27.9	33.2	18.0	14.8	100.0
	1971-75	9.1	27.6	30.1	17.5	15.8	100.0

(a) Excludes seed potatoes.

Source: Appendix Table 33.

The distribution of fresh vegetable imports is not unlike the regional distribution of Canada's population. It appears, therefore, that imports on a per capita basis are not greatly dissimilar. Table 19 shows that this is so, particularly if one excludes potato imports. Per capita imports were the highest for British Columbia during 1971-75, with 65 pounds. The Maritimes were the lowest with close to 40 pounds, followed by Ontario with 44 pounds, and the Prairies and Quebec fall in between with some 53 pounds of fresh vegetable imports per capita. Overall, including potatoes, imports increased less than population growth in Ontario, as per capita imports declined from 51.4 to 50.9 pounds, but in the other regions imports expanded more rapidly than population. The surge in per capita imports in the Maritimes is due to the imports of processing potatoes, possibly for re-export, and not of fresh market potatoes for domestic consumption.

Table 19: Vegetables: Per Capita Imports of Fresh Vegetables by Region, by Group, Annual Average, 1966-70 and 1971-75

	<u>Period</u>	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>
	- lb. per capita -					
Potatoes <sup>(a)</sup>	1966-70	10.1	6.2	9.1	14.5	25.2
	1971-75	37.7	8.0	7.3	12.3	26.3
Main processing vegetables	1966-70	7.9	13.7	10.1	11.4	14.6
	1971-75	10.1	13.9	10.3	14.0	16.0
Main organic soil vegetables	1966-70	19.4	27.1	24.3	26.1	33.9
	1971-75	20.4	30.2	25.0	29.8	36.8
Other vegetables	1966-70	7.7	6.1	7.9	6.7	9.6
	1971-75	9.6	8.8	8.3	9.1	12.3
Total	1966-70	45.1	53.1	51.4	58.7	83.3
	1971-75	77.8	61.0	50.9	65.2	91.4
Total (excluding potatoes)	1966-70	35.0	46.9	42.3	44.2	58.1
	1971-75	40.1	53.0	43.6	52.9	65.1

(a) Excludes seed potatoes.

Source: Appendix Table 35.

Table 20: Fresh Imports as a Percentage of Production, by Region, by Group, Annual average, 1966-70 and 1971-75

	<u>Period</u>	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>
	- per cent -					
Potatoes <sup>(a)</sup>	1966-70	0.6	4.4	7.4	6.2	23.9
	1971-75	2.9	6.8	6.0	5.3	24.4
Main processing vegetables	1966-70	28.4	33.0	7.1	114.3	34.0
	1971-75	39.0	41.9	6.8	128.2	51.4
Main organic soil vegetables	1966-70	176.0	67.3	56.2	296.5	167.2
	1971-75	114.1	77.2	58.3	270.8	171.0
Other vegetables	1966-70	11.6	26.8	16.4	56.0	57.2
	1971-75	29.1	39.7	18.4	114.3	96.5
Total	1966-70	2.6	21.7	14.5	22.6	45.4
	1971-75	5.1	29.4	14.8	24.5	53.1
Total (excluding potatoes)	1966-70	33.3	45.1	18.2	145.8	73.4
	1971-75	52.2	56.0	16.9	177.1	99.6

(a) Excludes seed potatoes.

Source: Appendix Table 11, 34 and Statistics Canada data.

The relative dependence on imports, comparing one region to another, is of course affected by the ability of each region to supply its own requirements in season. The ratio of fresh vegetable imports to production is a measurement of this capability, albeit not an entirely satisfactory one.<sup>(1)</sup> British Columbia is overall the least self-sufficient and the most dependent on imports (see Table 20 and Chart VIII).

The Maritimes, because of its very large potato crop, most of which is consumed outside the region, is overall the most self-sufficient. Excluding potatoes, it is not surprising to find that the Prairie region is the most, and Ontario the least, dependent on imports. Again, the high level of imports into British Columbia stands out. In all regions, with the exception of Ontario, imports of fresh vegetables have grown much more rapidly than total production of vegetables; Ontario's imports as a percentage of regional production have changed little. The low level of fresh imports relative to total vegetable production in Ontario is in part due to the concentration of the production of processing vegetables in that province, of which a considerable proportion is exported to the other regions in the processed form.

Another element affecting the importance of a region as an importer of fresh vegetables is changes in the volume and pattern of interregional movements of fresh vegetables. Any decline in such shipments, not offset by changes in production, will boost foreign imports of one region relative to those of the other. The Board's analyses indicate that interregional trade among the western, the central and the Maritime regions has been greatly diminished. Interregional trade is still important in some instances, e.g., between Ontario and Quebec, and between British Columbia and Alberta, but the cross-country trade of earlier years is no longer as important.

### Exports

Exports of fresh vegetables, during the period 1961-65, averaged 578 million pounds, a volume approximately equal to that of the competitive imports. After that time period, though, the gap between Canadian exports and imports began to widen. Total Canadian exports remained stable during the latter part of the 1960s and then began to decrease, mainly due to lower potato and onion exports, while imports continued to climb. The value of Canadian exports increased from an average of \$16.4 million in 1961-65 to \$32 million dollars in 1975, due entirely to the general increase in fresh vegetable prices. (Appendix Tables 36 and 37).

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(1) It would be preferable to look only at in-season or competing imports. This information was not widely available on a regional basis for the relevant period. Therefore, the ratios in Table 20 are much higher than they would have been had in-season imports been considered only. It is believed, however, that regional variation would remain as indicated above.

Canada exports only a small number of vegetables. During the period 1971-75, nearly 78 per cent of the volume of exports, and 73 per cent of the value, was accounted for by the exports of potatoes and turnips (rutabagas). These two vegetables occupy a somewhat unique position in Canadian production. Rutabagas are a storable vegetable which require a late-season frost to bring out their flavour, and as such are very suitable for Canadian climatic conditions. Over two-thirds of Canadian potato exports are seed potatoes for which Canadian growers have obtained a high international reputation. With the exception of tomatoes and some of the other minor export vegetables, such as radishes, Canadian exports are largely restricted to storable vegetables.

Canadian growers exported about 6 per cent of their total production of all vegetables during 1971-75. This proportion was close to 8 per cent in 1961-65. This relative decline is due mainly to the lower proportion exported of onions and seed potatoes. During 1971-75, exports of rutabagas accounted for 40 per cent of Canadian production, while for carrots and onions the corresponding figures were 13.1 and 14.0 per cent. Potato exports represented only 5.7 per cent of total output during that period (Appendix Table 38).

The Maritimes produce potatoes far in excess of what its population can absorb and, as would be expected, significant volumes are exported (see Appendix Table 39). That region accounted, in 1971-75, for slightly more than half of all fresh potato exports, and for nearly 90 per cent of all seed potato exports. In terms of all vegetables, the Maritime region comprised more than half of the Canadian total. Ontario was the leading exporter of all vegetables other than potatoes, and ranked second overall. Only 9 per cent of all vegetable exports originated in Quebec, although this province was much more important as an exporter of carrots and onions, of which it accounted for around 30 per cent. The Prairie region exports largely table potatoes, about a quarter of the total foreign sales of that commodity. British Columbia is not significant as an exporter of vegetables.

Exports of fresh perishable vegetables, such as tomatoes, are largely limited to the United States with smaller volumes going to the Caribbean area. The same situation also applies to rutabagas and carrots. For potatoes and onions the situation is greatly different. Dry onions were exported mainly to Europe and the Caribbean with only 16 per cent going to the United States, in 1971-75; however, only exports to the United States increased from the level in 1966-70. Whereas two-thirds of the exports of table potatoes went to the United States, only 25 per cent of seed potato exports were for that country, with the remainder going to a large number of countries in Europe and South America.

### Balance of Trade

Canada's trade in fresh vegetables in 1975 resulted in a deficit of \$154 million on exports of \$32 million and imports of \$186 million. The last time that Canada had a trade surplus for fresh vegetables was 1948. Since that time the value of imports has increased continuously. Exports, generally, declined until the late fifties and have increased slowly since that time (Appendix Table 43 and Chart IX).

During the 1961-75 period under review in this study exports rose from an average of \$16 million in 1961-65 to \$24 million in 1971-75, an increase of 8 million or 50 per cent. Total imports went up from \$54 to \$140 million, or by \$86 million or 159 per cent. As can be seen imports increased much more rapidly than exports and consequently the deficit grew substantially (Table 21).

The trade deficit referred to above, however, incorporates the effect of non-competing imports which comprised around 50 per cent of total fresh vegetable imports. Considering only competing imports, trade in fresh vegetables still resulted in a growing deficit, albeit a smaller one. On this basis the deficit totalled, on average, \$49 million in 1971-75 compared with \$11 million in 1961-65. In the most recent year, 1975, the deficit was \$67 million.

Table 21: Vegetables: Canadian Trade Balance, 1961-75

<u>Year</u>	<u>Exports</u>	<u>Competing Imports</u>	<u>Total Imports</u>	<u>Trade Balance Competing Imports</u>	<u>Total Trade Balance</u>
- \$'000 -					
1961-65	16,370	26,937	53,815	-10,567	- 37,445
1966-70	19,330	39,165	81,073	-19,835	- 61,743
1971-75	23,664	72,341	139,519	-48,677	-115,855
1971	16,155	44,095	95,932	-27,940	- 79,777
1972	17,113	59,839	118,408	-42,726	-101,295
1973	23,061	73,806	139,818	-50,745	-116,757
1974	30,146	85,249	157,269	-55,103	-127,123
1975	31,846	98,715	186,167	-66,569	-154,321

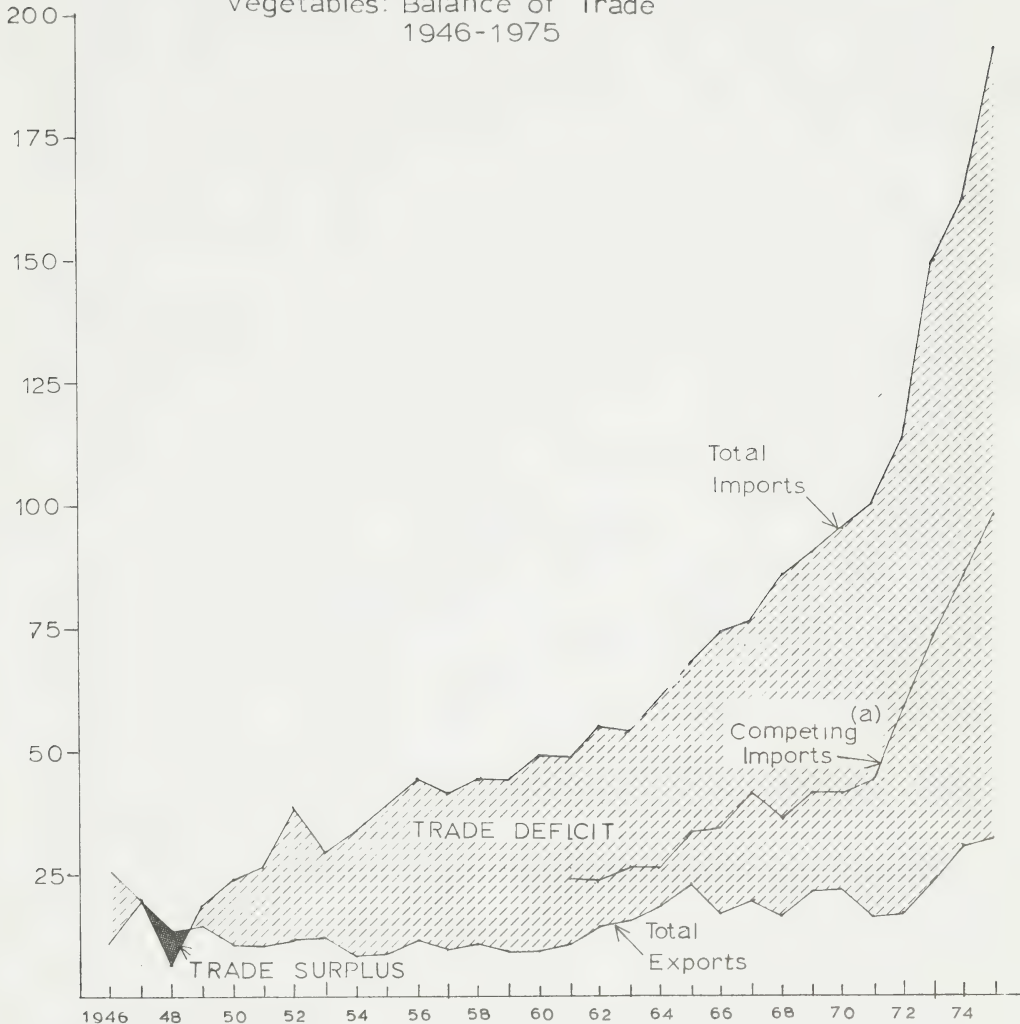
Source: Appendix Tables 22,29 and 37.

### CONSUMPTION OF VEGETABLES

Consumption of vegetables, both for processing and fresh market, averaged 7.5 billion pounds per annum during 1971-74, up 17 per cent from the average in 1961-65. The proportion met by imports, over this time frame, rose from 18.5 per cent to 24.3 per cent (Table 22).

\$ Million

Chart IX  
Vegetables: Balance of Trade  
1946-1975



(a) imports during the period in which Canadian produce is marketed.

Source: Appendix table 29 & 43.



In terms of only fresh market vegetables, consumption has actually declined from 4.3 billion pounds in 1961-65 to 4.1 billion pounds in 1971-74. While total fresh market consumption decreased, imports of fresh market vegetables increased, and their share of the total estimated market for fresh vegetables rose from 20.0 per cent during 1961-65 to 28.5 per cent during 1971-74. When non-competing imports, i.e., imports of fresh market vegetables during the period when domestic supplies are unavailable, are excluded, the market share of imports is, of course, lower but has increased also, from 11.8 per cent to 17.0 per cent. Moreover it is evident that the level of import penetration has increased most rapidly since 1970.

The Board's more detailed commodity reports indicate that fresh market consumption has increased for such vegetables as lettuce, celery, tomatoes, cucumbers, peppers, radishes, and cabbage, which may be designated the "salad" vegetables. Moreover this growth in consumption, though for some vegetables partly met by higher domestic production, was largely supplied by foreign growers both in-season and out-of-season. Fresh market consumption of storable vegetables has generally dropped sharply, particularly in the case of potatoes, beets, parsnips, and turnips; for onions and carrots it actually expanded somewhat, notably the former. The housewife increasingly finds these vegetables too time-consuming to prepare, a factor which has led to greater processed consumption; changing eating habits have also affected consumption of different vegetables. The domestic market for other, relatively minor, fresh market vegetables, such as snap beans, cauliflower, broccoli, Brussels sprouts and asparagus has tended to increase during the period under study.

With respect to both storable vegetables and the more minor fresh market vegetables, imports have increased not only when domestic supplies were unavailable or inadequate but also during the Canadian marketing season. Import penetration has, not surprisingly, been the highest during the "shoulder" months at the beginning and end of the season, and has also increased most at these times. Penetration by imports when Canadian growers market the bulk of their production is low, usually less than 10 per cent, but has also risen.

Canadian consumption of vegetables for processing, in contrast to the diminution in fresh market consumption, has expanded substantially, from an average of 2.1 billion pounds per year during 1961-65 to 3.4 billion pounds in 1971-74. In other words, about 45 per cent of total vegetable consumption during the latter period was in the processed form, compared with 30 per cent in 1961-65. Most of the increase in consumption of processing vegetables was met from domestic production. However, imports of fresh vegetables for processing and of processed vegetables in fresh equivalent weight rose at a more rapid rate than domestic supplies and increased their share from 15.3 per cent in 1961-65 to 19.3 per cent in 1971-74. Much greater imports of processed tomatoes are responsible for most of this increase in import penetration. Import competition for processed potatoes, in volume terms the most important vegetable processed, actually declined. Most of the shift from fresh market to processed consumption was accounted for by potatoes, although this change in consumer preference was visible to some degree for almost all vegetables.

The overall growth in consumption of vegetables, during the period under study, has largely been a result of population growth. The average Canadian has increased his or her consumption of vegetables very little; per capita consumption averaged 351 pounds in 1971-74 compared with 341 pounds in 1961-65 (Appendix Table 40). The relative stability of per capita vegetable consumption, which rose by less than 3 per cent during the period under study, suggests that growth for Canadian growers in the future will be dependent on the increase in the population of this country and on their success in reducing import competition.

Implicit in the foregoing discussion, per capita consumption of processed vegetables has increased from 110 pounds in 1961-65 to 157 pounds in 1971-74, whereas fresh market use has declined from 230 pounds to 194 pounds. Per capita consumption, in total, ranged from an average of 153 pounds, in 1971-74, for potatoes to .25 pound for rhubarb. After potatoes, tomatoes ranked second, with 66 pounds, followed by sweet corn, carrots, lettuce, cabbage, and onions, with 21, 18, 17, 13, and 11 pounds respectively.

Table 22: Vegetables: Consumption, Total, Fresh Market Vegetables, Vegetables for Processing, and Imports as a Percentage of Consumption, Annual Average, 1961-65, 1966-70 and 1971-74

		<u>From Domestic</u> <u>Production</u>		<u>Imported</u>	<u>Total</u> <u>Consumption</u>	<u>Imports as %</u> <u>of Consumption</u>
		- million lb. -				%
A	Fresh market vegetables	1961-65	3,463	866	4,329	20.0
		1966-70	3,297	1,011	4,308	23.5
		1971-74	2,905	1,158	4,063	28.5
B	Fresh market vegetables <sup>(a)</sup>	1961-65	3,463	461	3,924	11.8
		1966-70	3,297	526	3,823	13.8
		1971-74	2,905	593	3,498	17.0
C	Processing vegetables <sup>(b)</sup>	1961-65	1,754	318	2,071	15.3
		1966-70	2,342	519	2,861	18.1
		1971-74	2,742	654	3,397	19.3
D	Total vegetables consumption (A & C)	1961-65	5,217	1,184	6,400	18.5
		1966-70	5,639	1,530	7,169	21.4
		1971-74	5,647	1,812	7,460	24.3

(a) Competitive imports only.

(b) Including processed imports in fresh equivalent weight.

Source: Appendix Tables 23, 41, and 42.

The retail value of fresh market vegetables consumed in Canada is estimated by the Board at \$750 million for 1975. This was some \$300 million or 67 per cent higher than the estimated retail value of \$450 million in 1969. Inasmuch as per capita consumption over this time period remained almost unchanged, and population rose by some 9 per cent only, it is apparent that the growth in consumer spending on fresh market vegetables was almost entirely the result of higher prices. The Consumer Price Index for fresh vegetables substantiates this, it rose from 98.5 (1971 = 100) in 1969 to 151.7 in 1975, a rise of 53 per cent.

Spending on fresh vegetables is but a small part of total consumer spending; in 1975 it constituted less than 1 per cent of total expenditures of \$95 billion. They are, of course, more important in relation to consumer expenditures on food alone, but even then accounted for only some 4 per cent.

A pertinent consideration at this time is the importance of the duty on fresh vegetables relative to consumer spending on these commodities. The total duty collected on all imports of fresh vegetables amounted to \$7.7 million in 1974. The benefit of this duty to Canadian growers with respect to that part of their output consumed domestically was estimated at \$21.5 million in 1974; this assumed that growers priced their domestic sales fully up to the tariff. Thus the cost of the duty at the import and farm level totals \$29.2 million, which is increased further by an estimated \$12.8 million as a result of mark-ups at the wholesale and retail levels. Thus the total cost of tariff protection on fresh market vegetables is estimated at \$41.9 million in 1974 at the retail level<sup>(1)</sup>.

The cost of the duty to the consumer was equal to a little less than 6 per cent of total consumer spending on fresh market vegetables. In other terms, in 1974 tariff protection cost the average family of four \$7.44, relative to total spending on fresh vegetables in that year of \$132.10. Per capita, i.e., for each man, woman and child, the cost of the tariff on fresh vegetables at the consumer's level would be \$1.86 per year.

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(1) Assumptions and qualifications of this cost-benefit analysis are more fully explained in the Introduction to Part I, Volume I, of this report, see pages 10, 11.

## B. - FRUIT GROWING

This overview is essentially confined to fruits grown in Canada. Consequently, it deals in a summary manner, only with apples, pears, plums and prune plums, peaches, apricots, and cherries, collectively referred to as "tree fruits," and with strawberries, raspberries, loganberries, blueberries, cranberries, blackberries and grapes, collectively called "small fruits." Cantaloupes, considered a fruit in Canada, and a vegetable in the United States, is generally included as a separate category. The discussion and the statistics do not cover non-indigenous fruits such as bananas, oranges, lemons, etc.

### LOCATION

The location of fruit production is largely determined by climate. Fruit trees cannot bear extremely low temperatures during the dormant winter period. In addition, a late frost occurring during the blossom, pollination or fruit setting stage will seriously affect the size of the coming crop. Consequently tree fruit production, especially that of tender tree fruits, is concentrated in two areas: southern Ontario, principally the Niagara Peninsula, and the interior of British Columbia, almost exclusively the Okanagan Valley. Although a severe winterkill does occur from time to time, these two regions have moderate winters, and are near large bodies of water which reduce the danger of a late frost during the spring. Apple trees can endure somewhat harsher conditions and are, in addition to the two aforementioned areas, also grown in the Annapolis Valley of Nova Scotia, and south-western Quebec.

Among small fruits the production of grapes requires climatic conditions very similar to those for tree fruits, and furthermore, for winemaking, needs little precipitation as the fruit matures. Grape production is therefore concentrated in the same regions as tender tree fruits. Commercial berry production, other than blueberries, is spread out more widely across Canada. Production in the southern part of Ontario and Quebec, is, in part, the result of climatic considerations, but is more related to the size of the nearby market, as most of the crop is for fresh market consumption. The ideal temperate, relatively moist, climatic conditions for berry production are found in the lower mainland of British Columbia. Blueberries, primarily from bushes found in the wild, are picked mainly in Quebec and New Brunswick.

The Canadian fruit growing industry is largely the northern extension of a fruit growing zone which is essentially located in the United States. This applies particularly to the industry in British Columbia. About 55 per cent of deciduous tree fruit production in the United States takes place in California, Oregon, and Washington; a proportion which rises to 77 per cent if apples are excluded (Appendix Table 44). Furthermore, close to 90 per cent of all small fruits, including grapes, are grown in the Pacific Coast States. The lower part of British Columbia is the northern tip of this prolific fruit growing region. This position means that the element of risk with respect frost and winterkill is greater for British Columbia

growers, a fact which has been demonstrated several times in the past. Furthermore, growers in California, Oregon, and Washington harvest most fruits some weeks earlier and thus have an advantage over growers in British Columbia in supplying the "early" market.

The Niagara Peninsula in Ontario is not unlike the fruit production area in Michigan. The latter is located on the leeward side of Lake Michigan, benefiting from the moderating influence of the winds off the lake. Michigan has a prominent, and diversified fruit growing industry, growing apples, pears, plums, peaches, cherries, strawberries, and grapes. Most of its production is, however, concentrated in apples and sour cherries, in which it is important nationally. Michigan production of other tree fruits and of small fruits is very small relative to the output of the Pacific Coast States. Growing conditions in the Niagara Peninsula, and southern Ontario in general, are quite similar to those in Michigan, which would suggest that the competitive position of Ontario and Michigan growers as against growers in California, Washington, and Oregon is also similar, with the exception of the tariff.

#### NUMBER OF TREES AND NUMBER OF ACRES

The 1971 Census collected data on acreage for individual tree fruits; however, such data were unavailable for other years. Statistics on the number of trees were available for 1961 as well as for 1971. The growth in the productive capacity of the Canadian fruit growing industry can be measured, therefore, on the basis of the number of trees only, not acreage, and only for the period 1961-1971, and not subsequently. The Census collects information on acreage for three small fruits, strawberries, raspberries, and grapes and for other small fruits combined. For cantaloupes there was no such information. It should be noted that not all fruit trees reported to the Census are for commercial production. Many trees reported are part of small orchards, production of which is for farm consumption and is not included in the statistics for commercial fruit production. A high proportion of these "non-commercial trees" are recent plantings, which will never become productive because of lack of proper care. Inasmuch as no commercial fruit production is recorded for the Prairie Provinces, it may be assumed that all trees reported for those provinces fall in the aforementioned category.

In 1971, there were 10.8 million fruit trees in Canada, an increase of almost 1.5 million or 15 per cent since 1961 (Table 23). There were, however, wide variations from this average growth rate among individual tree fruits. The number of apricot trees declined almost by half and smaller percentage declines occurred in the number of peach, pear, and plum and prune plum trees. On the other hand, the number of apple trees increased by almost 2 million or 39 per cent. Smaller increases occurred in the number of cherry trees, both sweet and sour. Apple trees have become increasingly more important, accounting for 62 per cent of the stock of all fruit trees in 1971 compared with 51 per cent in 1961. The share of the two next prominent fruits, peaches and pears dropped to 15.5 and 10.2 per cent respectively. Apples, peaches and pears represent, combined, close to 90 per cent of all Canadian fruit trees.



According to the 1971 Census, there were in that year 189,901 acres in fruit production in Canada; 134,700 in tree fruits and 55,201 in small fruits. Among tree fruits, apples, not surprisingly, accounted for the largest acreage, 92,292 or 68.5 per cent, of total tree fruit acreage. Peaches, were next, followed by pears, with 15,538 and 11,478 acres respectively. The number of acres planted to small fruits remained roughly the same from 1961 to 1971. The total number of acres planted to raspberries and strawberries declined while that planted to grapes increased.

Table 23: Fruits: Number of Trees and Number of Acres Cultivated, by Commodity, 1961 and 1971

	<u>%</u> <u>Change</u>			<u>Per Cent Share</u> <u>of Planted</u> <u>Trees/Acres</u>	
	<u>1961</u>	<u>1971</u>	<u>1961 to 1971</u>	<u>1961</u>	<u>1971</u>
<u>Tree Fruits</u>	<u>Number of Trees</u>				
Apples	4,796,955	6,687,242	+39.4	51.3	62.2
Pears	1,182,019	1,093,483	- 7.5	12.7	10.2
Plums & prunes plums	558,787	410,859	-26.5	6.0	3.8
Cherries (sweet)	368,187	405,772	+10.2	3.9	3.8
(sour)	390,178	402,488	+ 3.2	4.2	3.7
Peaches	1,891,151	1,671,333	-11.6	20.2	15.5
Apricots	162,456	87,848	-45.9	1.7	0.8
Total	9,349,733	10,759,025	+15.1	100.0	100.0
	<u>Number of Acres</u>				
<u>Small Fruits</u>					
Strawberries	13,051	12,785	- 2.0	23.9	23.1
Raspberries	5,739	4,288	-25.3	10.5	7.8
Grapes	22,820	24,512	+ 7.4	41.9	44.4
Other small fruits	12,929	13,616	+ 5.3	23.7	24.7
Total	54,539	55,201	+ 1.2	100.0	100.0

Source: Census of Canada 1961 and 1971.

Between 1961 and 1971, most of the expansion in the number of fruit trees and acreage planted to small fruits occurred in British Columbia, while significantly smaller increases occurred in the Maritimes and Ontario (Appendix Table 45). On the other hand, the number of trees in Quebec and the Prairies declined. The stock of fruit trees confirms that tree fruit production is very much concentrated in Ontario and British Columbia; they had, in 1971, nearly four-fifths of all fruit trees and over 70 per cent of the tree fruit acreage, and, excluding apples, an even higher proportion of tender fruits.



Appendix Table 45 also provides insight into the relative concentration of particular fruits in the various regions. In 1971, for example, more than four-fifths of all sour cherry and peach trees were in Ontario, as well as three-fifths of all pear, plum and prune plum trees. British Columbia had more than 70 per cent of all apricot trees. This province has also greatly expanded its share of the national stock of apple trees, from 29.6 per cent in 1961 to 39.7 per cent in 1971; the number of apple trees in British Columbia increased by 87.3 per cent during that decade.

In 1971, the distribution of fruit trees in Ontario was much less concentrated than in other provinces. About 40 per cent of Ontario fruit trees were apples, 29 per cent peaches and 14 per cent pears. On the other hand, there was almost a total dependence on apples in Quebec and the Atlantic Provinces with 98 per cent and 91 per cent respectively of all their fruit trees being accounted for by this fruit. In British Columbia, apples with two-thirds of the tree fruit acreage and 71 per cent of all fruit trees are also very important.

The total acreage planted to small fruits declined in all provinces between 1961 and 1971, with the exception of British Columbia and Quebec. In British Columbia, expansion was particularly evident with respect to grapes. Grape production, however, remains concentrated in Ontario; it had, in 1971, over 90 per cent of the total Canadian grape acreage. Half of the raspberry acreage in 1971 was in British Columbia, and the other half, approximately equally divided, was in Ontario and Quebec. The largest acreage of strawberries, a third of the Canadian total, was in Quebec, with the Atlantic region, Ontario and British Columbia being the other main growing areas. Blackberry, loganberry and cranberry production is located primarily in British Columbia.

An important aspect of the stock of fruit trees is its age. A high and increasing proportion of trees over 20 years old signals an aging orchard from which production is unlikely to increase, and may in fact decline. On the other hand, a high and increasing proportion of young trees indicates an orchard that at present has a high number of non-productive trees and a considerable cost overhead, but at the same time an orchard from which output is likely to expand for a number of years.

The Census of Agriculture collects information on the number of trees under five years old and those five years and older (Appendix Table 46). It can be seen, comparing 1961 and 1971, that the proportion of young non-bearing apple trees has increased sharply in each major growing area. In the latter year, a third of all apple trees were younger than five years old. Considering the two main commercial production areas of British Columbia and Ontario only, the same was true for peaches, plums, and apricots. Only cherry orchards, both sweet and sour, appear to have aged.<sup>(1)</sup>

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(1) For pears this comparison could not be made because in 1961 the Census collected data with respect to trees less than 10 years of age and in 1971, less than five years of age.

The availability of suitable land in Canada for expanding future fruit production was an important consideration in the Board's deliberations. On the basis of evidence brought before the Board it is clear that with respect to small fruits, such as berries, land is not a restricting factor. The same probably applies to apples which can be grown successfully under a wider range of climatic conditions. It seems, however, that for tender tree fruits, such as peaches and pears, and grapes the supply of land will become a constraint for future growth. The pressure of urbanization on agricultural land in the Niagara Peninsula is well known. And, while tree fruit and grape production has expanded westward from that area along the shore of Lake Erie, the availability of land suitable for fruit production, i.e., near the lake, in competition with other agricultural and non-agricultural uses, is also limited there. While some additional acreage is available in the interior of British Columbia the very geography of that fruit growing area indicates definite limits, which have nearly been reached. There are no other areas in Canada which have the peculiar characteristics of the Niagara Peninsula or the Okanagan Valley for the production of tender tree fruits.

#### NUMBER OF GROWERS

There has been a sharp reduction in the number of growers reporting production of tree fruits and small fruits during the intercensal period 1961-71 (Table 24). The number of farms reporting orchards declined by 42.7 per cent from 19,552 to 11,198 and the number reporting other fruits dropped by 50 per cent from 20,198 to 10,094.<sup>(1)</sup> The decline in the number of producers was a widespread phenomenon being experienced in each province. While statistics after 1971 are not available there is no reason to believe that this trend has ceased.

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(1) It should be made clear that, while there were not as many as 10,094 growers of small fruits; this figure was arrived at by adding the number of growers which reported growing each individual small fruit, and assumes that all growers of small fruits grow one fruit only. In reality, the actual number is considerably smaller because the above number includes a considerable degree of double counting of all those growers who grew more than one small fruit. This problem did not arise with respect to tree fruits.

Table 24: Fruits: Regional Distribution of Number of Commercial Fruit Farms in Canada, 1961 and 1971

		Absolute Change 1961 to 1971	% Change 1961 to 1971	Percentage of total		
<u>1961</u>	<u>1971</u>	<u>1971</u>	<u>1971</u>	<u>1961</u>	<u>1971</u>	
- number -		- per cent -				
<u>Tree Fruits</u> <sup>(a)</sup>						
Atlantic region	1,987	888	- 1,099	-55.3	10.2	7.9
Quebec	4,777	2,043	- 2,734	-57.2	24.4	18.3
Ontario	8,022	4,884	- 3,138	-39.1	41.0	43.6
Prairies	385	221	- 164	-42.6	2.0	2.0
British Columbia	4,381	3,162	- 1,219	-27.8	22.4	28.2
Sub-total	19,552	11,198	- 8,354	-42.7	100.0	100.0
<u>Small Fruits</u> <sup>(b)</sup>						
Atlantic region	2,133	795	- 1,338	-62.7	10.6	7.9
Quebec	5,902	3,003	- 2,899	-49.1	29.2	29.7
Ontario	8,864	4,339	- 4,525	-51.0	43.9	43.0
Prairies	628	349	- 279	-44.4	3.1	3.5
British Columbia	2,669	1,606	- 1,063	-39.8	13.2	15.9
Sub-total <sup>(c)</sup>	(20,198)	(10,094)	(-10,104)	-50.0	100.0	100.0
Total <sup>(c)</sup>	(39,750)	(21,292)	( 18,458)	-46.4	100.0	100.0

(a) On farms having 25 or more trees.

(b) Includes berries and grapes.

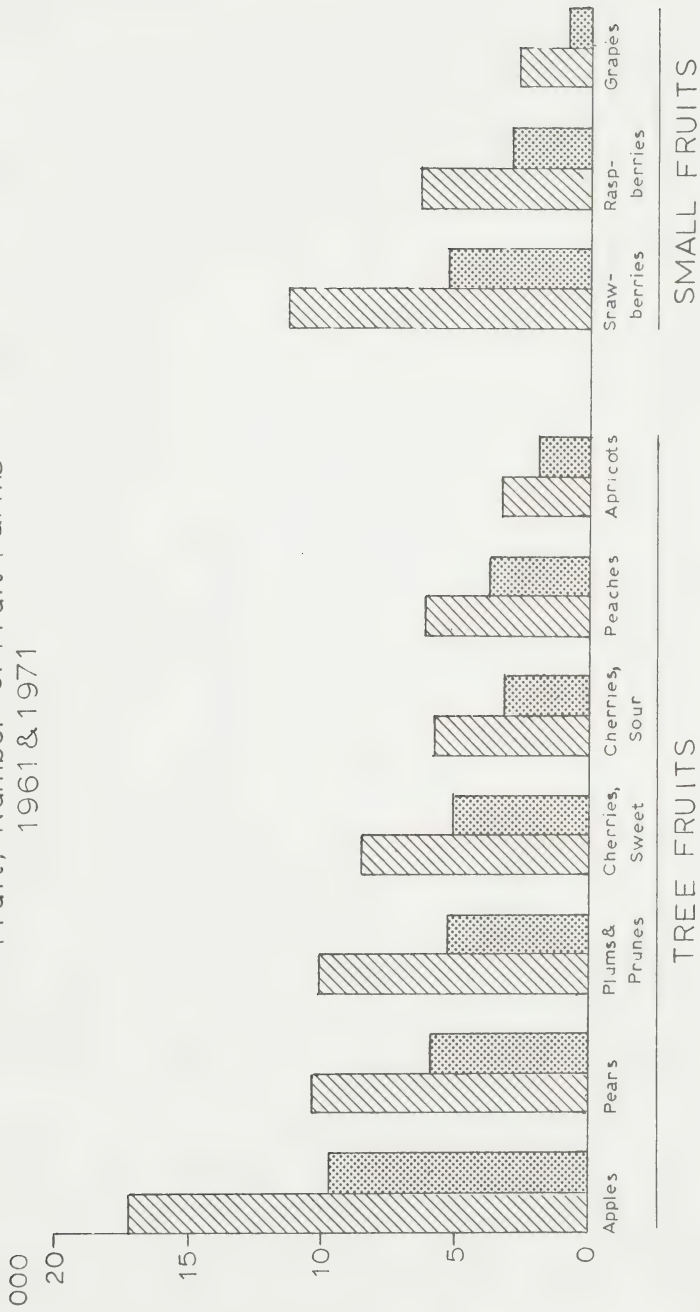
(c) Figures in brackets are for use in calculating averages only.  
The number of farms are not additive because one farm may be producing more than one type of fruit.

Source: Census of Canada 1961 and 1971.

The largest number of growers reported apples production, 9,686 (see Appendix Table 47). This was followed by pears, strawberries, plums and prune plums, and sweet cherries with 5,986, 5,299, 5,219, and 5,093 growers respectively. The number of reporting growers dropped sharply for each fruit during the 1961-1971 decade (Chart X).

In view of the 15 per cent increase in the number of fruit trees it is readily apparent that the average orchard in Canada has increased substantially in size (Appendix Table 48), and it can be expected that the scale of production has continued to improve since 1971. In that year, the data indicated that each farm reporting

Chart X  
Fruit; Number of Fruit Farms  
1961 & 1971



Source: Appendix Table 47

1961

1971

fruit production averaged 961 trees, nearly double the average of 478 trees in 1961. The degree of farm consolidation was greatest in the Atlantic region and Quebec, and smallest in the Prairie region. For the two most prominent Canadian growing provinces, Ontario and British Columbia, the rate of change in the size of orchard per grower was closer to the national average. The average orchard in 1971 was largest in British Columbia, 1,171 trees, second largest in the Atlantic region, 1,009 trees, with Ontario next in line with 990 trees. Quebec's average orchard was two-thirds the size of the Ontario one.

The expansion in the number of trees per grower was greatest for apples; in 1971 the average grower reported 690 trees while in 1961 he had reported 278 trees, an increase of close to 150 per cent (Appendix Table 49). The number of trees per grower, or scale of production, improved for all tree fruits, with the exception of apricots, but the rate of change in each instance was well below that for apples.

The average size of plantings of small fruits and grapes increased between 1961 and 1971 as well (Appendix Table 49). The percentage change in the number of acres per grower was the smallest for grape growers, though, in 1971, the average of 13.5 acres was many times larger than the average size of plantings for raspberry and strawberry producers, 1.4 and 2.4 acres respectively.

The average grower of tree fruits in Canada had in 1971 an orchard of 12 acres. The average orchard in Ontario, Quebec and British Columbia was close to this national figure, while that in the Atlantic region, at 16.1 acres, was considerably higher. With respect to individual tree fruits, the average size was 9.5 acres for apples, 4.1 acres for peaches and less than 2 acres for each of the other fruits (Appendix Table 50).

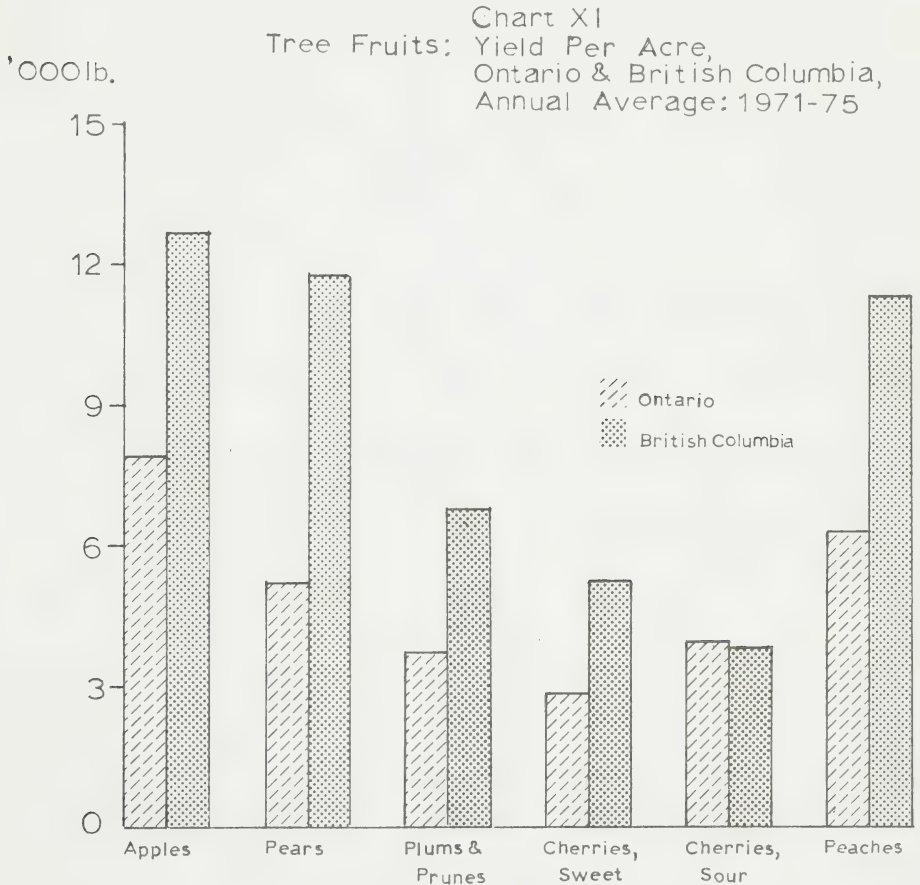
### YIELDS

The yield, or the volume of fruit produced per unit of growing capacity, is an important element in determining the cost of producing fruit per pound, per 8-quart basket or per bushel hamper. Many costs are incurred before and independent of the volume harvested, and such fixed costs weigh less heavily with a higher yield. For tree fruits, yields were calculated for 1961-65 per tree and for 1971-75 per tree and per acre, by dividing the average annual volume of production during each of these five-year periods by the number of trees five years and older and by the number of acres reported in the 1961 and 1971 Census. For small fruits, where availability permitted it, yields have been calculated on the basis output per acre.

Total output per tree has apparently declined by 4.6 per cent to 163.2 pounds for the 1971-75 period (see Table 25). For apples, the most important individual fruit, the yield per tree declined by 13.2 per cent between 1961-65 and 1971-75. The average of 213.1 pounds per tree for apples was however much higher than for other tree fruits. Yields for apricots and peaches rose as well, while those for cherries and pears declined. For the main tree



fruits grown, British Columbia growers had yields per tree substantially greater than in Ontario during 1971-75 (see Appendix Table 51). For instance, the yield of pears was 144.5 pounds as against 70.5 pounds, and for sweet cherries, peaches and plums the difference was equally striking. Only with respect to apples were Ontario's yields higher. However, this is due to the increased plantings of dwarf apple trees in British Columbia, which yield less. On the other hand, many more dwarf trees can be planted per acre than standard-sized apple trees; in 1971, British Columbia growers averaged 123 trees per acre, compared with 58 for Ontario growers (Appendix Table 52). Consequently, the yield per acre was substantially higher in British Columbia, 12,611 pounds, compared to 7,927 pounds in Ontario. Yields per acre are much higher in British Columbia for all tree fruits, the average for all tree fruits in British Columbia was 11,437 pounds relative to 6,683 pounds in Ontario, a very significant difference.



Source: Appendix Table 51.



Table 25: Fruits: Changes in Yields of Individual Fruit Crops  
in Canada, 1961-1965 and 1971-1975

	Average Yield		Percentage Change
	1961-65	1971-75	1961-65 to 1971-75
	- lb. per tree -		- % -
<u>Tree Fruits</u> <sup>(a)</sup>			
Apples	245.6	213.1	-13.2
Pears	96.9 <sup>(b)</sup>	94.9	- 2.1
Plums and prune plums	61.6	66.0	+ 7.1
Cherries (sweet)	77.3	71.0	- 8.2
(sour )	73.6	55.2	-25.0
Peaches	92.8	107.7	+16.1
Apricots	78.3	125.3	+60.0
Total	171.0	163.2	- 4.6
	- lb. per acre -		- % -
<u>Small Fruits</u>			
Strawberries	2,453.8	2,711.2	+10.5
Raspberries	3,189.2	3,413.9	+ 7.0
Grapes	4,645.7	6,200.9	+33.5
Total	3,757.3	4,840.6	+28.8

(a) Based on number of trees five years and over.

(b) Based on number of trees 10 years and over.

Source: Derived from Agriculture Canada and Statistics Canada data.

The limited information on acreage for small fruit indicates that there have been substantial improvements in yields during the period under review. Most notable is the large increase in the yield per acre of grapes (see Table 25).

#### PRODUCTION

During the period 1971-75 Canada produced 1.39 billion pounds of fruit, roughly the same volume as in 1961-65 (Table 26 and Appendix Table 53). The output of a number of fruits increased, most notably, grapes, blueberries, and cranberries. These increases were, however, offset by lower production of apples, raspberries, sour cherries and peaches. Apples, despite the decline in production, remained by far the most important fruit, accounting, on average, for close to two-thirds, or 894 million pounds during 1971-75. Grapes, peaches, and pears rank next, well behind apples. These four fruits together comprise on average, 88.9 per cent of total Canadian fruit production. Tree fruits were equal to 82.7 of all fruit grown in Canada, and small fruits, 17.2 per cent.

The output of vegetables is determined, (1) weather conditions aside, each spring at seeding or planting time. The decision to plant fruit trees or strawberry plants will not result in any output for a number of years, one or two years in the case of small fruits and at least five years for tree fruits. (2) For example, strawberry plants do not reach full production until the second year, and apple trees do not begin to bear fruit until the fifth or sixth year. Moreover, for most fruits, once production begins it continues, natural hazards aside, for a considerable number of years, for example apple trees can produce for as long as 25 years.

These characteristics of fruit production have a number of important implications. In the first place the decision to extend an orchard will not affect output until several years later. If the circumstances underlying the original decision turn out less favourably than anticipated by the time the new trees become productive then there will be over-production, possibly for several years. If faced with over-production, the most obvious solution would appear to be to cut down the excess trees, vines or plants. The impact is, of course, immediate but in a sense also very permanent and irrevocable; the cutback will be felt for a long time. Growers are, also, extremely reluctant to undertake such drastic action because the trees, vines and plantings represent a substantial financial investment. Moreover, the surplus stock of trees and vines may well be required in years affected by adverse weather conditions. The more frequent practice, when there are surplus supplies, is, therefore, to leave the fruit on the trees or vines. As a consequence of these considerations, situations where production exceeds demand are more likely to occur with respect to fruits than vegetables.

Table 26: Fruits: Production by Region, 1961-65 and 1971-75

Region	Average Production		Share of Total Production		Change in Production
	1961-65	1971-75	1961-65	1971-75	1961-65 to 1971-75
	- '000 lb. -		%		%
Atlantic	171,823	134,787	12.4	9.7	-21.6
Quebec	245,535	260,939	17.7	18.7	+ 6.3
Ontario	565,259	565,805	40.8	40.6	+ 0.1
British Columbia	402,979	431,745	29.1	31.0	+ 7.1
Canada <sup>(a)</sup>	1,385,595	1,393,274	100.0	100.0	+ 0.6

(a) Production in the Prairies is not recorded by Statistics Canada. The Prairie region with less than 1 per cent of the fruit trees is not a significant factor in Canadian fruit production.

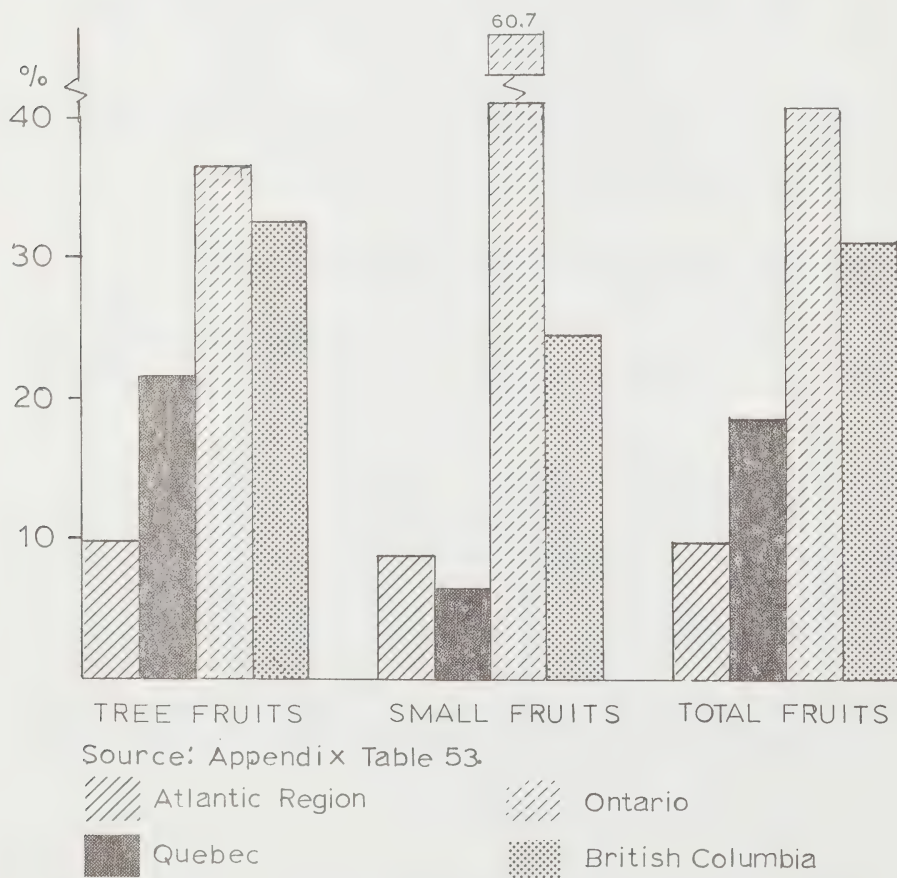
Source: Derived from Appendix Table 53.

- (1) The sole exception is asparagus which is not harvested until the third year.
- (2) Among fruits, cantaloupes are the exception; they are sown annually.

Ontario, producing a diverse assortment of fruits, ranked first with slightly more than 40 per cent of Canadian production (Table 26). British Columbia was second in importance with 31 per cent. These two provinces each improved their overall position somewhat during the period under review, and combined represented 71 per cent of all fruit production in Canada during 1971-75. These two provinces accounted for nearly 85 per cent of Canadian production of small fruits and close to 70 per cent for tree fruits (Chart XII). The other two areas, Quebec and the Maritimes, are considerably less important as fruit producers. Quebec's share, almost solely on the basis of apples, has risen somewhat, while the position of the Atlantic region, whose major fruit crop is also apples, has declined both in volume and in its share of the Canadian total.

Fruit production is very much concentrated with reference to both region and fruit (see Appendix Table 53). During 1971-75, about 99 per cent of all tender tree fruits were produced in Ontario and British Columbia. Among the small fruits, grapes, raspberries

Chart XII  
Fruit: Percentage Distribution of  
Production, by Region,  
Annual Average: 1971-75



and loganberries are similarly concentrated in these two provinces. Strawberries are, however, more widely grown and blueberries are produced primarily in Quebec and the Atlantic region. Apples are the most widely grown fruit; about an eighth is grown in the Maritimes mostly in Nova Scotia, and close to 30 per cent is produced in each of Ontario, Quebec, and British Columbia. Apples are the most important fruit in each growing area, and indeed on the basis of volume are practically the only fruit produced in the Maritimes and Quebec, representing 82 and 94 per cent of their respective output of all fruits. Ontario's fruit growing industry is more diversified than those of other regions. Tender tree fruits and small fruits, mainly grapes, each accounted, in 1971-75, for about one-quarter of Ontario's total production. The British Columbia industry is also diversified but with greater emphasis on apple production; apples represented 63 per cent of total production, tender tree fruits about a quarter and small fruits the remaining 13 per cent.

While the greater part of Canadian fruit production is sold on the fresh market a substantial amount is also processed. Moreover, the proportion going to processing has, overall, increased during the period under study, from 513 million pounds in 1961-65 to 524 million pounds in 1971-74 (Appendix Table 54). During the latter period, 39 per cent was processed and 61 per cent went to the fresh market. The expansion in processing was attributable to grapes, pears, blueberries, and cranberries; sales to processors declined for all the other fruits.

#### FARM VALUE

The farm value of fruit production in Canada averaged \$112.2 million per year during 1971-75, a level 75.3 per cent higher than the annual value of \$64.0 million during 1961-65 (Table 27). Total income to growers from fruit production has thus risen substantially during the period under review. The farm value of all fruit produced in 1975 was \$124.0 million.

Table 27: Fruits: Farm Value and Distribution of the Farm Value, by Region, 1961-65 and 1971-75

<u>Region</u>	<u>Farm Value</u>		<u>Per Cent of Total</u>		<u>&amp; Change</u>
	<u>1961-65</u>	<u>1971-75</u>	<u>1961-65</u>	<u>1971-75</u>	<u>1961-65 to</u> <u>1971-75</u>
	- \$'000 -		- \$'000 -		- % -
Atlantic	6,255	9,769	9.8	8.7	+56.2
Quebec	9,372	15,524	14.6	13.8	+65.6
Ontario	27,189	50,618	42.5	45.1	+86.2
Prairies	-	-	-	-	-
British					
Columbia	<u>21,176</u>	<u>36,282</u>	33.1	32.3	+71.3
Canada	<u>63,994</u>	<u>112,194</u>	100.0	100.0	+75.3

Source: Derived from Appendix Table 55.

In value terms fruit production is much less important than vegetables; this is, of course, also true in volume. Vegetables grown in 1975 were valued, at the farm level, at \$416.7 million. The farm value of fruit production in that year was thus some 70.2 per cent less. Fruit production represented only a little more than 1 per cent of total farm cash receipts, and about three and a half per cent of cash receipts from crops. The relative contribution of fruit production, understandably, varies greatly from one region to another. In British Columbia, fruit production accounts for 35.9 per cent of total provincial receipts from all crops and 12.0 per cent of all farm cash receipts. In Ontario, however, the largest producer of fruit, these crops accounted in 1974 for 7.8 per cent of total farm cash receipts and only 2.7 per cent of total provincial farm cash income (Table 28).

Table 28: Fruits: Farm Value of Fruits as a Percentage of Total Cash Receipts and Cash Receipts from Crops, by Region, 1974

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>Canada</u>
	- \$ million -					
Total Cash Receipts	288.9	1,173.9	2,460.4	4,572.7	382.8	8,878.7
Farm cash receipts from crops	123.5	119.8	850.5	2,904.8	128.4	4,127.0
Farm cash receipts from fruits	9.6	18.0	66.5	-	46.1	140.2
<u>Farm Value of Fruits as a Percentage of:</u>	- per cent -					
Total farm cash receipts	3.3	1.5	2.7	-	12.0	1.6
Farm cash receipts from crops	7.8	15.0	7.8	-	35.9	3.4

Source: Statistics Canada.

Ontario also had the largest farm value, and accounted on average, for 45.1 per cent of the Canadian total during 1971-75. British Columbia growers received a third, and thus the two major fruit growing areas comprised 77 per cent of the national total. Fruit production in Quebec and in the Maritimes was valued at \$15.5 and \$9.8 million, or 13.8 and 8.7 per cent respectively. The value share of the latter two was smaller than their volume contribution because of their dependence on apples, a relatively low value fruit.

A few crops account for most of the farmers' income from fruit production (Appendix Table 55). Four fruits, apples, grapes, peaches, and pears, accounted for 69.2 per cent of the total in 1961-65 and their share increased to 70.3 per cent in 1971-75. Apples, with an average farm value of \$45.0 million per year during 1971-75, continued to account for a very much larger proportion of farm value, 40 per cent in 1971-75, than any other fruit; this share has, however, declined during the period under



review. The farm value of grapes, at an average of \$15.5 million during 1971-75, was a distant second. The share of small fruits has increased, solely based on the increase in value of grape production, and amounted in 1971-75 to a third. Two-thirds of the farm value of Canadian fruit production is accounted for by tree fruits.

The increase in the total farm value of fruit production is due entirely to higher prices received by growers; as was indicated earlier, the volume of production did not change during the period under review. The average unit farm values increased by 76.1 per cent from 4.6 cents per pound during 1961-65 to 8.1 cents during 1971-75 (Appendix Table 56). With the exception of cranberries, farm-gate prices of each fruit increased. The average grower price for fruits, unlike vegetables, increased between the first half and second half of the 1960s, and thus the rise during the entire period under review was not solely a phenomenon of the 1970s. However, average unit farm values did rise very sharply from 1971, 5.9 cents, to 1973, 10.4 cents.

This increase in average unit farm values to Canadian growers paralleled developments in the United States. The early 1970s was a period of strong economic growth and rapidly rising incomes which stimulated North American consumption of fruit. These favourable market conditions provided upward pressure on all fruit prices in 1972 and 1973. When a small crop in Canada and a below-average berry crop on the west coast was superimposed on this buoyant demand in 1973, grower prices for these fruits rose very sharply. Farm-gate prices of most fruits continued to rise in 1974. However, in that year, the market for apples and small fruits returned to more normal conditions resulting in lower prices for these fruits; these declines were sufficient, because of the sheer volume and importance of apple production, to bring the average unit farm value of all fruits in 1974 down to 9.1 cents per pound from 10.4 cents in the previous year.

The average farm value per pound of fruit in Canada during 1971-75 ranged from a low of 5.0 and 7.0 cents per pound for apples and pears to a high of 29.6 and 34.7 cents for strawberries and raspberries. As is evident in Appendix Table 56, the average return to the grower for small fruits is considerably higher than for tree fruits. The average unit farm values mentioned above combine the average return to the grower on sales to processors and to the fresh market. The average return to the grower from fresh market sales is normally higher than the return from sales to processors. With reference to Appendix Table 17,<sup>(1)</sup> it can be seen that the average farm value of fruits exceeds that for vegetables.

Differences in average unit farm values between various fruits are in the long run caused by differences in costs of production. For instance, it requires substantially more time to pick small fruits than the larger tree fruits; this is in part why unit values for strawberries are higher than for peaches. Cranberries, a small fruit now mechanically harvested is an obvious exception. Yields have a significant impact on unit costs of production. Apples, the highest yielding tree fruit, have the lowest average unit farm value. Cherries with the lowest yield per tree have the

(1) See page 241.



highest average unit farm values among tree fruits. Among the small fruits, grapes, with the highest yield per acre and also largely harvested mechanically for processing, have the lowest unit farm value. The higher yields for vegetables, as well as the larger degree of mechanical harvesting, largely explain the lower average farm-gate price for vegetables as compared with fruits.

Grower returns for processing fruit are invariably lower than those for fresh market fruit. A major reason for this is lower packaging cost, since fruit for processing is usually shipped in bulk containers. Moreover, frequently sales to processors are residual sales, i.e., sales which the fresh market cannot absorb without weakening fresh market prices; in these instances the prime concern is not the price paid by the processor but rather price stabilization and orderly marketing of the entire crop. This situation applies to fruits marketed through producers' marketing boards, as is the case with most of the tender tree fruits and grapes.

A comparison of average unit values between Ontario and British Columbia reveals no consistent pattern (Appendix Table 57). Farm-gate prices are higher in Ontario than in British Columbia for some fruits such as apples, pears, raspberries and strawberries, while for others, such as cherries, peaches, and grapes, they are higher in British Columbia. In the case of strawberries the difference is largely explained by end-use; Ontario grows primarily higher-priced fresh market strawberries and British Columbia, processing strawberries; each a different variety. End-use also explains the difference for peaches, as the British Columbia industry sells a higher proportion of its crop to the fresh market.

One major factor which influences grower returns in British Columbia is its proximity to Washington, Oregon, and California where the bulk of U.S. tree fruit and small fruit production takes place. British Columbia growers therefore receive little protection through transportation costs in their own home market, and none at all in their sales eastward across Canada where they compete with products from the Pacific Coast States, as for example, apples and pears. The Ontario grower with transportation advantage over most of his competitors in the eastern Canadian market gets a higher return. The proximity of the U.S. industry also governs British Columbia grower prices for raspberries, blackberries, and loganberries.

#### FOREIGN TRADE

Because of its climate, Canada does not grow as wide a variety of fruits as the United States. In addition, since most fresh fruits are storable for only a few days, even for indigenous fruits the requirements of Canadian consumers outside the harvesting period have to be satisfied through imports. For apples and pears, which can be stored for a considerable period of time, domestic requirements can be met from domestic supplies over a longer period of time, but eventually are supplemented by imports as well. Hence, Canada is a large importer of fresh fruits, not only of those which are not grown domestically, but also of indigenous kinds.

Canada exports a narrow range of fruits amounting to \$15 million in 1971-75 and, with the exception of apples, in small volumes only. Fresh imports of indigenous fruits exceed exports by a wide margin, resulting in a substantial deficit.

### Imports

Canada imported during 1971-75 on average 1.95 billion pounds of fresh fruit valued at \$215 million. Of this total non-indigenous fruits amounted to 1.35 billion pounds, valued at \$120 million.

### Fresh Fruits

Imports of fresh fruit of a kind grown in Canada averaged 598 million pounds during 1971-75 compared with an average of 408 million pounds during 1961-65 (see Appendix Table 58). Imports thus increased by about 47 per cent, or much more rapidly than domestic production which remained roughly the same. As a result, imports as a proportion of production rose from 30 per cent during 1961-65 to 44 per cent during 1971-74. The growth in fresh fruit imports has occurred mostly during the past decade. Although there was moderate growth from 1961 to 1965, the volume of imports rose by 11 per cent between 1965 and 1971 and then by 18 per cent from 1971 to 1975. Imports of small fruits, mostly grapes, are larger than imports of tree fruits. Imports of tree fruits have however increased the most during the period under study. This growth is particularly noticeable for apples, pears, plums and prune plums, and sweet cherries.

Total value of fresh imports of indigenous fruits amounted to an average of, \$95.4 million in the period 1971-75, an increase of \$59.5 million or 165 per cent over the \$36.0 million average for 1961-65 (see Appendix Table 59). The value of imports rose by much more than the volume, because import prices have increased sharply. Moreover, the value of fresh fruit imports rose especially during the 1970s when import prices increased most. From 1971 to 1975 the value of fresh fruit imports rose 66.2 per cent from \$69.5 million to \$115.5 million.

The bulk of fresh fruit imports, 534 million pounds during 1971-74, was for fresh market consumption; 53 million pounds or only about 9 per cent were imported for processing (see Table 29). Imports for processing have, however, increased substantially since 1961-65 when they amounted to 23 million pounds or 6 per cent of total fresh imports. Two fruits, grapes and apples, accounted for much of this growth. Grapes for processing rose from an annual average of 4.6 million pounds in 1961-65 to 20.7 million in 1971-74 and apples for processing from 2.8 million to 14.1 million pounds.

Fresh market imports have, of course, contributed most to the increase in total fresh fruit imports. Grapes have been very prominent and accounted during 1971-74 for 231 million pounds or 43 per cent of total fresh market fruit imports. With respect to fresh market imports of tree fruits, apples, pears, and plums and prune plums are the largest. Imports of tree fruits have increased by 81

Table 29: Fruits: Volume of Fresh Imports Available for Processing and the Fresh Market, Annual Average, 1961-65 to 1971-74

	Fresh Imports		For Fresh Market		For Processing	
	1961-65	1966-70	1971-74	1961-65	1966-70	1971-74
- \$'000 -						
<b>Tree Fruits</b>						
Apples (b)	54,283	64,455	112,309	51,500	58,855	98,234
Pears (b)	25,546	35,363	48,905	24,370	30,036	44,831
Plums and prune plums	19,107	13,588	31,551	18,290	21,304	29,020
Peaches	33,836	16,426	30,252	31,960	34,343	28,452
Apricots	3,804	3,349	1,932	1,540	1,239	1,399
Cherries (sweet)	2,859	5,062	11,615	2,573	4,556	9,313
(sour)	201	227	367	20	23	37
Sub-total	139,636	168,470	236,931	130,253	150,356	211,286
<b>Small Fruits</b>						
Strawberries	20,713	17,528	25,299	13,653	13,642	21,677
Raspberries and loganberries	46	61	95	-	-	-
Blueberries	1,319	2,181	3,692	1,319	2,181	3,692
Cranberries	4,419	2,979	4,331	2,962	1,536	1,648
Grapes	203,343	255,725	252,157	198,708	242,125	231,490
Sub-total	229,840	278,474	285,574	216,642	259,484	258,507
<b>Other Fruits</b>						
Cantaloupes	38,106	50,623	63,798	38,106	50,623	63,798
Total	407,582	497,567	586,303	385,001	460,463	533,591

(a) Data not available for 1975.

(b) Crop year.

(c) Four-year average, 1961-1964.

(d) Three-year average, 1971-1973.

(e) For data on individual years 1971 to 1975 see Appendix Table 58.

(f) Tariff Board estimate.

(g) Four-year average omitting 1967.

Source: Derived from Agriculture Canada and Statistics Canada data.

million pounds since 1961-65 compared with 42 million pounds for small fruits. The growth of these imports reflects, in addition to an increase in in-season penetration of the domestic market, such factors as the greater affluence of Canadian consumers which have boosted out-of-season purchases of premium-priced imported fresh fruit.

Non-Competing Imports<sup>(1)</sup> - The volume of non-competing fresh imports is estimated to have averaged 356 million pounds for the period 1971-75 (see Table 30). Therefore out of total imports of fresh fruit of 598 million pounds, about 60 per cent entered Canada when domestically grown fruit was largely unavailable. Non-competitive imports of fresh fruits were valued at an average of \$58 million during 1971-75, an increase of 150 per cent from the 1961-65 average of \$23 million (Appendix Table 61).

Non-competitive imports rose by 86 million pounds or 32 per cent from 1961-65 to 1971-75. The growth in the volume of non-competitive imports was greatest for grapes which increased by 53 million pounds from 1961-65 to 1971-75, accounting for 62 per cent of the total expansion in non-competing fresh imports. Virtually all of these non-competitive imports are believed to be for fresh consumption. Grapes and cantaloupes together accounted for 297 million pounds or 84 per cent of all non-competitive imports in 1971-75. Improved transportation systems, resulting in greater out-of-season availability of higher quality imported produce, and the short Canadian growing season, underlies the importance and growth in out-of-season imports of these fruits.

Competitive Imports - Competing fresh imports are estimated to have averaged 242 million pounds per annum during 1971-75 or about 41 per cent of total fresh imports (Table 31). Competing imports increased by 105 million pounds or by 76 per cent. The value of competing imports of fresh fruits averaged \$38 million during 1971-75, an increase of 193 per cent over the average of \$13 million imported in 1961-65 (Appendix Table 63). Competing imports in volume, but especially in value, expanded most rapidly during the 1970s.

Competing imports of apples totalled 117 million pounds, 58 per cent of such imports of tree fruits and 48 per cent of in-season import of all fruits. Moreover, the increase in competing imports of apples, 63 million pounds, accounted for 60 per cent of the overall growth in competitive imports during the period under review. Pears, in terms of volume of competing fresh imports, ranked next to apples, 34 million pounds during 1971-75, followed by plums and prune plums, cantaloupes, peaches, and sweet cherries. The volume of in-season imports has increased for all fruits except strawberries, apricots, peaches, and cranberries; import growth was greatest for grapes, followed by blueberries and sweet cherries.

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(1) See Chapter I for definitions of "competing" and "non-competing," p. 9.

Table 30: Fruits: Volume of Fresh, Non-Competing Imports,  
by Commodity, Annual Average 1961-65  
to 1971-75

	Average 1961-65	Average 1966-70	Average 1971-75	% Change 1961-65 to 1971-75
- '000 lb. -				
<u>Tree Fruits</u>				
Apples	-	-	-	-
Pears	7,845	12,631	16,059	+104.7
Plums and prune plums	3,294	3,408	5,219	+ 58.4
Peaches	21,422	20,250	18,208	- 15.0
Apricots	539	476	658	+ 22.1
Cherries (sweet)	111	126	313	+182.0
(sour)	5	12	45	+800.0
Sub-total	33,216	36,903	40,501	+ 21.9
<u>Small Fruits</u>				
Strawberries	8,458	9,921	15,615	+ 84.6
Raspberries	17	19	43	+152.9
Blueberries	920	1,507	2,212	+140.4
Cranberries	322	147	233	- 27.6
Grapes (a)	203,189	252,811	256,498	+ 26.2
Sub-total	212,906	264,405	274,602	+ 29.0
<u>Other Fruits</u>				
Cantaloupes	23,830	31,152	40,440	+ 69.7
Total	269,952	332,460	355,543	+ 31.7

(a) Labrusca and vinifera grapes.

Source: Appendix Table 60.

The bulk of competing imports, 204 million pounds or 86 per cent, is for the fresh market (Appendix Table 64). Fresh imports for processing amounted to an estimated 53 million pounds during 1971-74. It is noteworthy, however, that imports for processing have increased at a much more rapid pace than fresh market imports. The bulk of the growth in processing imports was accounted for by grapes and apples.

Fresh imports for processing were, on average, equivalent to 4.4 per cent of Canadian production of fruit for processing during 1961-65 (Table 32). This proportion rose to 10.1 per cent during 1971-74. For most fruits, during the period under study, Canadian growers lost ground in supplying domestic processing requirements. The level of sufficiency was highest for raspberries, pears, grapes, and cherries where domestic growers provided over 65 per cent of the fresh purchases by Canadian processors. Processing requirements of cranberries are almost entirely imported, because the processor located in eastern Canada imports from growers in the eastern United States,



while Canadian production, largely located in British Columbia, is mostly exported. In the case of strawberries fresh imports for processing are declining but are increasingly replaced by imports of semi-processed strawberries.

Table 31: Fruits: Volume of Fresh, Competing Imports,<sup>(a)</sup>  
by Commodity, Annual Average, 1961-1965  
to 1971-75

	Average 1961-65	Average 1966-70	Average 1971-75	% Change 1961-65 to 1971-75
	- '000 lb. -			
<u>Tree Fruits</u>				
Apples	54,283	64,455	116,978	+115.5
Pears	17,701	22,732	33,527	+ 89.4
Plums and prune plums	15,813	20,180	27,058	+ 71.1
Peaches	12,414	16,176	11,662	- 6.1
Apricots	3,265	2,873	1,249	- 61.7
Cherries (sweet)	2,748	4,936	11,161	+306.1
(sour)	196	215	326	- 66.3
Sub-total	106,420	131,567	201,962	+ 89.8
<u>Small Fruits</u>				
Strawberries	12,255	7,607	9,977	- 18.6
Raspberries	29	42	34	+ 17.2
Blueberries	399	674	1,684	+322.1
Cranberries	4,097	2,832	3,975	- 3.0
Grapes(b)	154	2,914	786	+410.4
Sub-total	16,934	14,069	16,456	- 2.8
<u>Other Fruits</u>				
Cantaloupes	14,276	19,471	24,009	+ 68.2
Total	137,630	165,107	242,427	+ 76.1

(a) Imports during Canadian marketing period.

(b) Labrusca grapes only.

Source: Appendix Table 62.

Import competition during the Canadian marketing season is greater for fruit for the fresh market than for processing fruit, and has also increased during the period under study. Fruit imports for the fresh market were equal, on average, to 24.7 per cent of fresh market production during 1971-74, a level almost twice as high as the 13.7 per cent supplied by imports in 1961-65 (Table 32). Domestic growers are weakest in supplying domestic fresh market requirements of plums and prune plums, pears, and sweet cherries. During the



period under study Canadian growers lost ground over the Canadian marketing season especially with respect to apples and cherries; competing fresh market imports of these two fruits as a percentage of fresh market production rose from 8.0 to 16.5 per cent and 16.9 to 55.6 per cent respectively comparing 1961-65 with 1971-74. Only in the case for peaches and strawberries did domestic growers succeed in displacing imports in the fresh market. Total fresh fruit imports, including those imported for fresh market use and for processing as a percentage of domestic production are illustrated in Chart XIII.

Table 32: Fruits: Competing Fresh Imports as a Percentage of Production for the Fresh Market and Processing, by Commodity, Annual Average, 1961-65 to 1971-74

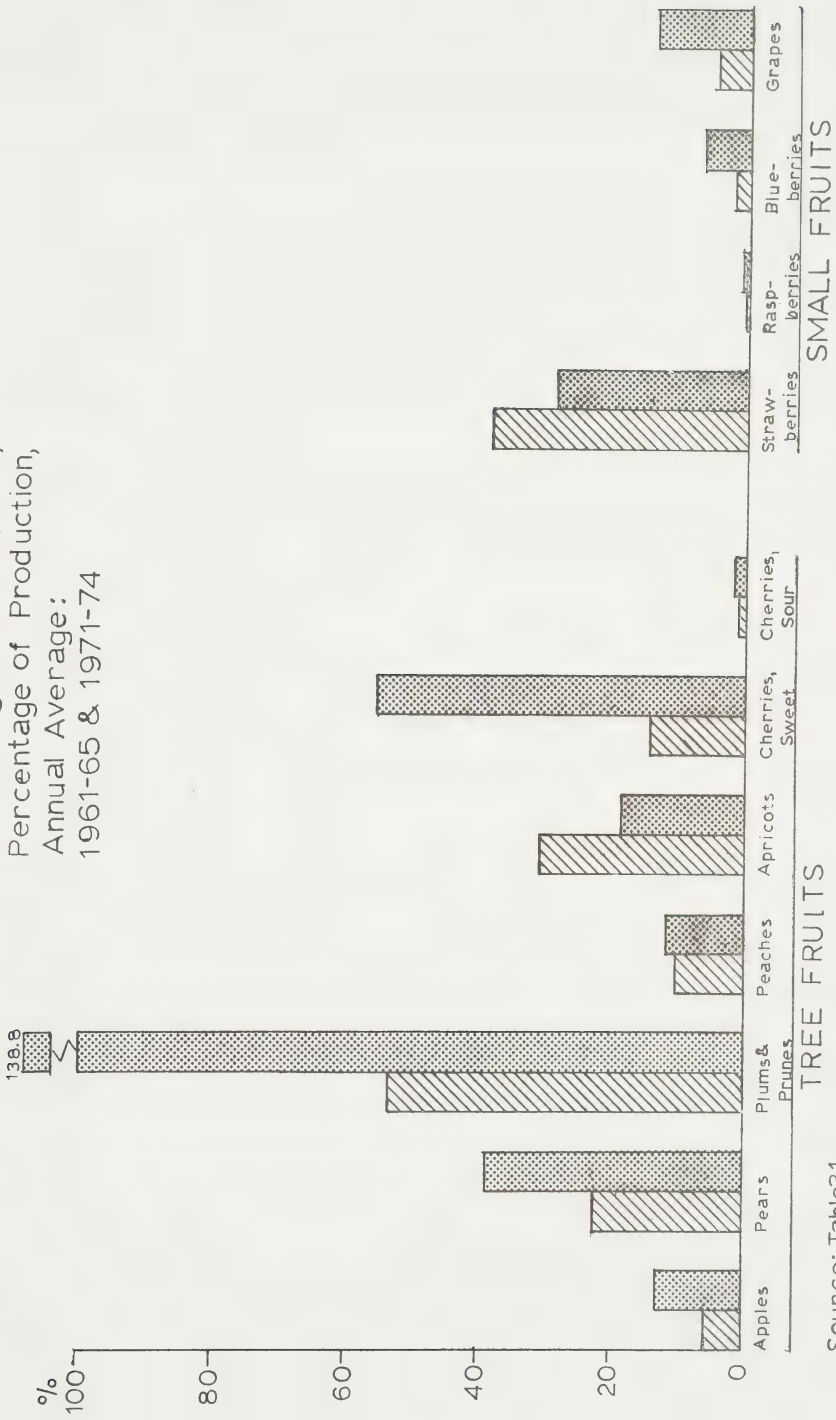
	Imports for Processing <sup>(a)</sup> as a Percentage of Production for Processing		Competing Imports for Fresh Market as a Percentage of Production for the Fresh Market		Total Imports as a Percentage of Total Production	
	1961-65	1971-74	1961-65	1971-74	1961-65	1971-74
- per cent -						
<u>Tree Fruits</u>						
Apples	1.0	5.3	8.0	16.5	5.9	13.0
Pears	3.2	10.3	39.1	66.2	22.3	39.5
Plums and prune plums	11.4	63.4	67.5	159.1	53.8	138.8
Peaches	3.3	7.4	16.1	13.3	10.2	11.9
Apricots	55.2	23.2	15.3	16.1	30.7	18.5
Cherries (sweet)	6.9	55.7	16.2	55.6	14.2	55.6
(sour)	0.9	2.4	0.7	..	0.9	1.9
Sub-total	2.3	7.2	12.2	22.5	8.9	17.6
<u>Small Fruits</u>						
Strawberries	51.3	36.1	28.5	25.4	38.3	28.5
Raspberries and loganberries	0.4	1.1	..	..	0.3	0.7
Blueberries	..	..	3.3	14.9	2.0	6.4
Cranberries	189.2	27.7	1,269.2	732.8	418.9	41.6
Grapes <sup>(b)</sup>	6.3	16.5	..	..	4.4	14.0
Sub-total	17.9	16.1	11.7	14.4	12.1	15.6
<u>Other Fruits</u>	..	..	234.7	108.7	234.7	1,087.1
Total	4.4	10.1	13.7	24.7	10.3	19.0

(a) Imports for processing for full crop year.

(b) Labrusca grapes.

Source: Derived from Appendix Tables 54 and 64.

Chart XIII  
Fruit: Competing Fresh Imports, as a  
Percentage of Production,  
Annual Average:  
1961-65 & 1971-74



A question of considerable interest is how many acres at, average Canadian yields per acre, would be required to completely displace competing fresh imports. To replace all competing imports would require close to 32,000 acres, on the basis of the 190 thousand acres reported in the 1971 Census (see Appendix Table 65). An additional 12,000 acres would be required for apples; but, of course, Canada is a substantial exporter of this fruit. With respect to other tree fruits and grapes, production of which is concentrated in Ontario and the interior of British Columbia, 16 thousand more acres would be required relative to the 54 thousand acres in Ontario and British Columbia for these crops in 1971. To produce only the increase in imports between 1961-65 and 1971-75 would require an estimated 16,000 additional acres.

### Processed Imports

During 1971-75 Canada imported an average of 316 million pounds per year of fruit in the processed form (see Appendix Table 66).<sup>(1)</sup> This was equivalent to 59 per cent of total Canadian output of processing fruits and 23.0 per cent of total fruit production. Imports of processed fruit, in fresh equivalent weight, rose by 84 per cent from the 1961-65 level, and thus have expanded much more rapidly than domestic production, both of processing fruit and of all fruit. The equivalent proportion of domestic production that was imported rose from 33.5 per cent during 1961-65 to 59.4 per cent in 1971-74 in terms of processing fruit and from 12.4 to 23.1 per cent for all fruit (Table 33).

Table 33: Fruits: Volume of Processed Imports<sup>(a)</sup> as a Percentage of Total Canadian Production and Total Canadian Production Available for Processing, Annual Average 1961-65 to 1971-74

	1961-65		1966-70		1971-74	
	Total Production	Processed Production	Total Production	Processed Production	Total Production	Processed Production
	- per cent -					
<u>Tree Fruits</u>						
Apples	3.5	11.5	3.7	10.8	1.8	5.9
Pears	13.0	27.8	12.2	25.2	19.8	41.4
Plums and prune plums	107.2	438.7	128.1	495.2	143.0	672.6
Peaches	26.9	58.2	59.0	188.9	62.3	268.4
Apricots	84.7	219.3	121.9	340.2	139.4	404.5
Cherries (sweet)	42.5	197.5	40.7	133.0	42.9	209.8
(sour)	19.0	21.2	12.1	13.3	21.0	25.8
Sub-total	10.7	31.4	12.4	35.0	13.1	41.1
<u>Small Fruits</u>						
Strawberries	31.1	72.4	31.9	83.0	52.6	179.4
Raspberries and loganberries	3.2	5.5	2.8	4.5	4.8	8.0
Blueberries	..	..	..	..	..	..
Cranberries	..	..	..	..	..	..
Grapes	31.5	45.1	46.0	60.2	99.2	117.2
Sub-total	24.7	41.0	33.2	51.8	71.1	98.2
<u>Other Fruits</u>						
Cantaloupes	..	..	..	..	..	..
Total	12.4	33.5	15.7	39.2	23.1	59.4

(a) Processed fruits converted to fresh equivalent.

Source: Derived from Appendix Tables 54 and 66.

(1) It should be noted that this volume probably understates the actual level of such imports because not all processed fruit imports could be identified from published import statistics.

Processed fruit imports in volume terms are the largest for peaches and grapes with a fresh equivalent volume averaging 66 million and 151 million pounds respectively during 1971-75. The volume of processed imports increased for all fruits with the exception of apples and plums and prune plums. Relative to total domestic fruit production, processed imports are small for apples and raspberries, 1.8 and 4.8 per cent respectively. For pears and sour cherries, processed imports are equivalent to about 20 per cent of total production in 1971-74. Processed imports of all other fruits are generally in excess of 50 per cent of total Canadian production of these fruits. In terms of Canadian production of fruit for processing, processed fruit imports are even more significant; in fact with respect to plums and prune plums, peaches, apricots, sweet cherries, strawberries, and grapes processed imports are equal to more than domestic production, that is to say Canadian fruit growers supply less than half of the domestic requirements for the processed product.

### Total Imports

Total fresh and processed imports of fruit amounted to 914 million pounds per annum during 1971-75. This was 58 per cent more than the 580 million pounds imported in 1961-65. During the more recent period three fruits, grapes, apples, and peaches represented 70 per cent of the total imports; grapes alone accounted for 45 per cent (see Appendix Table 67).

Competing imports, comprising in-season fresh imports and the fresh equivalent weight of all processed imports, totalled 559 million pounds per year during 1971-74 (Appendix Table 68). These imports were equivalent to 40.1 per cent of the 1,393 million pounds produced domestically. During 1961-65, competing imports, as a percentage of production, equalled 22.3 per cent of total domestic production.

Obviously, Canadian fruit production increased much more slowly than did competing imports and domestic consumption of fruit. This occurred for each fruit. Canadian growers were during 1971-75 in the strongest competitive position for raspberries and loganberries, blueberries, and apples, for which competing fresh and processed imports were equivalent to 4.8, 6.2 and 14.7 per cent of domestic production (see Tables 32 and 33). The corresponding percentage for pears was 60.2 per cent, for cherries 61.3 per cent, for peaches 70.2 per cent, for strawberries 82.6 per cent, for grapes 100.1 per cent, for apricots 153.1 per cent and for plums and prune plums 276.4 per cent.

The total additional acreage required to produce all competing fresh fruit imports and the fresh equivalent weight of processed imports is estimated at about 87,000 acres, at average Canadian yields, or roughly 46 per cent of the acreage reported in the 1971 Census (Appendix Table 65). Of this total, tree fruits, other than apples, and grapes would need an additional 63 thousand acres, which compares with 67 thousand acres reported for these fruits in 1971, as well as some 11 thousand acres of strawberries. In order to grow domestically the volume by which in-season fresh and processed fruit imports increased during the period under study, Canadian growers would have to expand their total area by some 40 thousand acres.

## Source of Imports

The United States is by far the largest foreign supplier of fresh fruit to Canada (Appendix Table 69). Canadian fresh fruit imports from that country averaged 540 million pounds or 92 per cent of all such imports per year during 1971-75. The United States produced, on average, 20.3 billion pounds of the kinds of fruit indigenous to Canada during the period 1971-74 (Appendix Table 44). Canadian fresh imports, quite clearly, are a minor factor in the overall disposition of the U.S. crop.

Mexico was the next largest supplier of Canada's imports during that period, accounting for 13 million pounds, or 2 per cent, of Canadian imports, of which more than four-fifths were cantaloupes. Imports from all other countries accounted for about 6 per cent of Canadian fresh fruit imports, of which the bulk is accounted for by apples, pears, and grapes. Imports from South Africa averaged 11.6 million pounds during the period 1971-75, 2 per cent of the total. A similar percentage was imported from New Zealand, and an even smaller volume from Australia. Given that fresh fruits are highly perishable and expensive to transport, it is not surprising that trade in these commodities is almost entirely confined to North America.

## Exports

Canadian fresh fruit exports totalled 120 million pounds annually during the period 1971-75. This represented 8.6 per cent of total domestic fruit production. The bulk of these exports, about four-fifths or 96 million pounds, are apples; during 1971-75, on average 10.7 per cent of total apple production was exported. Other fruits which are important in volume, and as a percentage of domestic production exported, are raspberries, blueberries, and cranberries, (see Appendix Table 70 and 72).

With the sole exception of cranberries, the volume of exports of each fruit has declined during the period under study. Total fresh fruit exports averaged 165 million pounds during 1961-65 or 25 per cent more than in 1971-75. Apples accounted for 134 million of that total. Furthermore, at that time, Canada exported 11.9 per cent of production, a proportion which has declined as Canadian growers increasingly lost ground in foreign markets. Higher domestic and export prices compensated for the lower volume of exports, so that the total value rose from an average of \$14.0 million in 1961-65 to \$15.4 million in 1975 (Appendix Table 71).

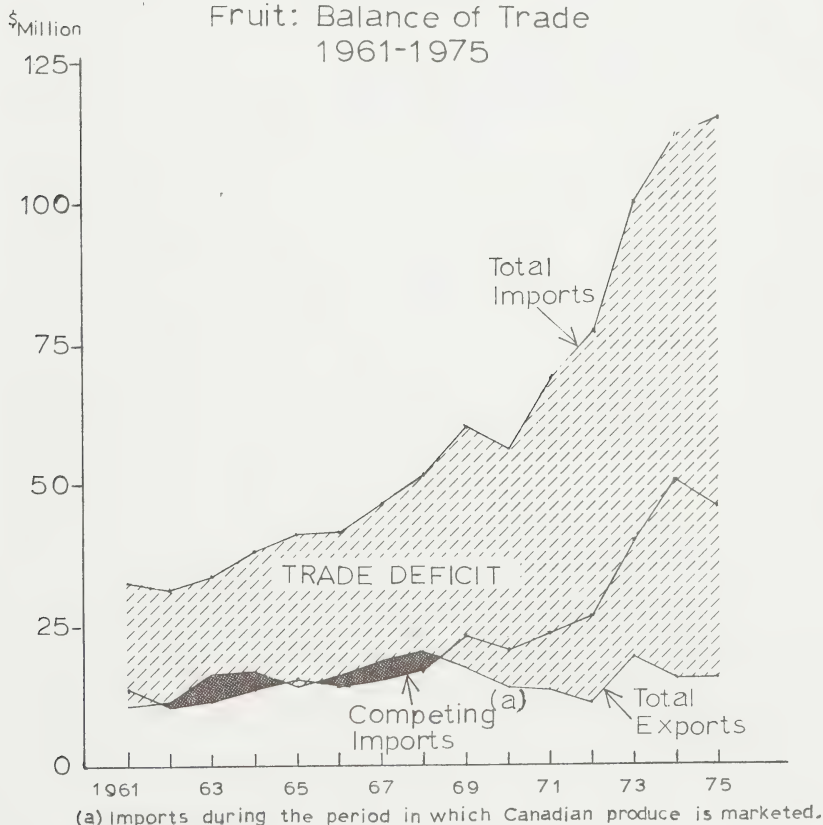
The major export market for Canada is the United States; it took 93.8 million pounds or more than three-quarters of total Canadian exports (Appendix Table 73). Only apples are exported in significant volumes to countries other than the United States, namely the United Kingdom, Hong Kong, and Norway. Canadian exports to the United States comprise less than 0.5 per cent of total U.S. production of these fruits, and thus, clearly, are an insignificant factor in that country's overall supply situation. This is true also for apples, the main export fruit, where Canadian exports are equal to just over 1 per cent of U.S. production.



### Balance of Trade

It is quite evident that the competitive position of Canadian fruit growers has deteriorated during the period under review. The volume of fresh exports has declined while the volume of such imports has risen. During 1961-65 Canadian trade in indigenous fresh fruits resulted in a surplus of 23 million pounds, on exports of 160 million and in-season imports of 138 million pounds. During 1971-75, the balance of trade was a deficit of 122 million pounds as exports totalled 120 million and imports 242 million pounds. The total turn round on foreign trade in fresh fruit, therefore, amounted to 145 million pounds or 10 per cent of Canadian fresh fruit production. By 1975, when the deficit on competing fresh fruit had increased further to 157 million pounds, the reversal in trade position since 1961-65 was equivalent to 180 million pounds or 13 per cent of production. When consideration is given to the position of domestic fruit growers with respect to trade in processed fruits it is readily apparent that their competitive position has diminished even more. An average deficit of 113 million pounds, in fresh equivalent weight, during 1961-65 had become a deficit of 277 million pounds in 1971-75, a loss of 164 million pounds. For fresh and processed fruit combined, the total turn round in trade during the period under review amounted to 395 million pounds, or 28 per cent of total domestic output in 1971-75.

Chart XIV  
Fruit: Balance of Trade  
1961-1975



Source: Appendix Table 74.



In value terms, a surplus of \$1.1 million during 1961-65 turned into a deficit of \$22.7 million in 1971-75. The value change was much more drastic because fruit prices have risen greatly, especially in recent years. When out-of-season imports of indigenous fresh fruits are added the overall deficit during 1971-75 averaged \$80.4 million (Chart XIV).

#### DOMESTIC CONSUMPTION

During the period 1971-74, (1) Canadians consumed, on average, 2.27 billion pounds of fruits per year. Thus consumption increased by 16.5 per cent from the level of 1.95 billion pounds in 1961-65 (Table 34). The volume of consumption of domestically grown fruit remained practically the same at an average of 1.19 billion pounds, and the entire expansion in the domestic market for these fruits accrued to foreign producers. Imports of fresh fruit and processed fruit in fresh equivalent weight rose from an average of 762 million in 1961-65 to 1.1 billion pounds in 1971-75. The import share of the domestic market rose from 39.1 to 47.7 per cent. Canadian growers supplied in 1971-74 just over half of the domestic demand, 52.3 per cent, compared to 60.9 per cent in 1961-65. Canadian growers and processors lost ground in foreign markets as well; exports of fresh and processed fruit declined during the period under review from 219 million to 169 million pounds.

Table 34: Fruits: Volume of Domestic Disappearance; Fresh and Processed, from Domestic Production and Imports, 1961-1974

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	Average 1971-74
- millions of lb. -							
Total Domestic Disappearance	1,951	2,084	2,263	2,117	2,326	2,385	2,273
From domestic production	1,189	1,186	1,278	1,120	1,118	1,241	1,189
From imports	762	898	985	998	1,209	1,144	1,084
Fresh Consumption	1,089	1,129	1,240	1,058	1,254	1,406	1,240
From domestic production	705	672	732	589	721	791	708
From imports	384	457	508	469	534	615	532
Processed Consumption	862	955	1,023	1,060	1,072	979	1,034
From domestic production	484	514	546	531	397	450	481
From imports	378	441	477	529	675	529	553

Source: Derived from Agriculture Canada and Statistics Canada data.

(1) It should be recalled at this point that the overview of fruit production is concerned with only those fruits referred to the Board under this Reference.

Consumption of fruits in the processed form amounted to 1.0 billion pounds per year during 1971-74. This was equal to about 45.5 per cent of total fruit consumption, and compared with 44.2 per cent in 1961-65. Consumption of processed fruits appears to have grown somewhat more rapidly than fresh market consumption during the period under review. The volume of domestically processed fruits consumed in Canada remained practically the same, at an average level of 481 million pounds during 1971-74. The volume of processed imports has, however, risen substantially; from an average of 378 million pounds in 1961-65 to 553 million in 1971-74, an increase of 46.3 per cent. The level of import penetration has risen from 43.9 to 53.5 per cent over the same time frame; more than half of the domestic market for processing fruits is now grown by foreign growers. The share obtained by imports varied greatly among the various fruits. During 1971-74, for apples, raspberries, sour cherries, and pears it was 3.9, 7.3 20.9, and 27.2 per cent. For all other fruits processed imports supplied at least 50 per cent of the domestic market, (Table 35).

Table 35: Fruits: Imports as a Percentage of Canadian Consumption; by Commodity, Annual Average, 1971-74

	Fresh Imports as a % of Fresh Market Consumption	Processed Imports <sup>(a)</sup> as a % of Processed Consumption
	%	%
Apples	16.6	3.9
Pears	51.9	27.2
Plums and prune plums	66.3	80.5
Peaches	26.1	71.4
Apricots	24.7	76.7
Cherries (sweet)	37.1	69.7
(sour)	1.2	20.9
Strawberries	48.1	57.7
Raspberries	..	7.3
Blueberries	34.6	..
Cranberries	89.4	..
Grapes	92.2	50.3
Cantaloupes	96.8	..

(a) Processed imports converted to fresh equivalent.

Source: Derived from Agriculture Canada and Statistics Canada data.

Fresh market consumption rose from an average of 1.1 billion pounds in 1961-65 to 1.24 billion in 1971-74. The growth in the domestic market for fresh fruit was, as in the case of processed consumption, entirely met by imports. Imports rose from 384 million to 532 million pounds, while the volume of domestic fruit remained almost unchanged at 708 million pounds. The share of the domestic market for fresh fruit obtained by imports was 42.9 per cent in 1971-74, considerably above the level of 35.7 per cent in 1961-65. This level of import penetration differed greatly among the individual fruits. During 1971-74, it ranged from 1.2 per cent for sour cherries and 16.6 per cent for apples to 96.8, 92.2, and 89.4 per cent for cantaloupes, grapes, and cranberries.

The seasonal pattern of fresh market fruit consumption has changed during the period under review. Today more fresh fruit is consumed during the off-season when fresh supplies are no longer available domestically. Table 36 illustrates that the share of total annual fresh market consumption during August to November has declined, in total by 8.5 percentage points, and that consumption during the other months of the year has picked up correspondingly.

Table 36: Fruits: Monthly Distribution of Total Fresh Market Consumption 1961 and 1974

Month	All Fruits Percentage of Annual Fresh Consumption		Difference in % Share 1961-74
	1961	1974	
Jan.	4.4	5.5	1.1
Feb.	4.7	6.1	1.4
Mar.	5.2	5.3	0.1
Apr.	4.0	5.7	1.7
May	5.2	7.6	2.4
June	9.3	9.6	0.3
July	11.0	11.9	0.9
Aug.	14.2	12.4	-1.8
Sept.	17.1	12.6	-4.5
Oct.	11.8	10.4	-1.4
Nov.	7.5	6.7	-0.8
Dec.	5.6	6.2	0.6
Total	100.0	100.0	-

Source: Derived from Agriculture Canada data.

Consumption of fresh fruits during the period when fresh supplies are domestically unavailable is entirely met by imports. Such non-competing imports have, as a result of the change in the seasonality of consumption, increased substantially. As indicated in

the preceeding section they rose from an average 270 million pounds per year during 1961-65 to 356 million pounds during 1971-75. On the other hand, competing imports have also increased more rapidly than domestic consumption. In 1961-65, competing fresh imports amounted to an average of 138 million pounds or 12.7 per cent of fresh market consumption and by 1971-74 to 242 million pounds or 19.5 per cent of consumption. Clearly, the level of import penetration has increased also during the Canadian marketing season.

The growth in total fruit consumption in Canada appears to be largely the result of an expanding population inasmuch as the level of per capita consumption has not changed during the period under review. Including cantaloupes, and both fresh and processed fruit, it averaged 94.8 pounds (see Table 37). It can be seen that there has been a slight tendency for consumers to substitute processed for fresh fruit; per capita consumption of fresh fruit dropped marginally while that of processed fruit rose somewhat. With respect to the fresh market, per capita consumption of apples, the most important fruit, declined the most, while for processed fruits, per capita consumption of grapes, mainly winemaking, increased the most.

Table 37: Fruits: Annual per Capita Consumption of Fruit;  
Total and by Product Form, Annual Average,  
1961-65 and 1971-74

	Annual Average per Capita Consumption					
	1961-1965			1971-74		
	Total	Fresh	Processed	Total	Fresh	Processed
- pounds -						
A. <u>Tree Fruits</u>						
Apples	43.5	29.5	14.0	39.3	26.9	12.4
Apricots	1.2	0.4	0.8	0.8	0.3	0.6
Cherries (sweet)	1.5	0.8	0.6	2.0	1.3	0.7
(sour)	1.2	0.1	1.1	0.9	0.1	0.8
Peaches	9.9	5.1	4.8	9.2	5.0	4.2
Pears	5.7	3.2	2.4	6.6	3.9	2.7
Plums and prune plums	4.2	2.2	2.1	3.5	2.0	1.5
Sub-total	67.2	41.3	25.8	62.3	39.5	22.9
B. <u>Small Fruits</u>						
Blueberries	0.5	0.4	0.1	0.6	0.5	0.2
Cranberries	0.3	0.2	0.1	0.2	0.1	0.1
Raspberries and loganberries	0.8	0.3	0.6	0.6	0.1	0.4
Strawberries	3.3	1.7	1.6	3.5	2.1	1.4
Grapes <sup>(a)</sup>	17.4	11.5	5.9	24.6	11.4	13.3
Sub-total	22.3	14.1	8.3	29.5	14.2	15.4
C. <u>Other Fruits</u>						
Cantaloupes	2.3	2.3	-	3.0	3.0	-
Total	91.8	57.7	34.1	94.8	56.7	38.3

(a) Excludes raisins.

Source: Derived from Agriculture Canada and Statistics Canada data.

The retail value of fresh market indigenous fruits consumed in Canada is estimated by the Board at \$450 million for 1975, an increase of \$150 million, or 50 per cent, over the estimated retail value of \$300 million in 1969. Consumer spending on indigenous fresh market fruits constitutes less than 0.5 per cent of total consumer expenditures and only about 2 per cent of expenditures on all food. As per capita consumption of these fruits actually declined slightly over this time period and the population growth was only 9 per cent, the rise in the consumer spending on these fresh market fruits was due almost entirely to higher prices.

The total duty collected on imports of indigenous fresh fruits amounted to \$2.1 million in 1974. The benefit of the duty to Canadian growers was estimated by the Board at \$7.9 million assuming that growers priced their domestic sales fully up to the tariff. The cost of the duty at the import and farm levels thus totalled \$10.0 million, which is increased further by an estimated \$4.4 million as the result of mark-ups at the wholesale and retail levels. Therefore, the total cost of the tariff, at the retail level, was estimated at \$14.4 million in 1974.

The cost of the duty to the consumer was equal to 3 per cent of total consumer expenditures on fresh market fruit. In other words, it is estimated that in 1974 tariff protection with respect to fresh fruit cost the average family of four \$2.56, relative to an annual level of spending on these commodities of \$78. Per capita, the cost of the tariff on fresh fruits at the consumer's level was 64 cents per year.

#### MARKETING

Fruits and vegetables are sold on the fresh market and for processing. Fresh market fruit is sold by the grower directly to the consumer via roadside stands, from the farmyard, or at farmers' markets. It is believed that the volume of direct farmer-consumer sales is becoming less important. Growers with larger and more specialized operations are unlikely to engage in this type of marketing.

Growers also sell fruit and vegetables directly to retailers. For this trade, the grower packs his product in bushel hampers, or 4-, 8- or 12-quart baskets, with final consumer packing and wrapping, if necessary, being left to the retailer. Retailers buying directly from growers are usually independent growers, operators of specialty fruit and vegetable stores, and institutional users such as restaurants. These sales take place at the farm or at the farmers' wholesale markets such as the one at the Ontario Food Terminal. Information on the volume of this trade is unavailable, but it seems reasonable to assume that it has diminished as both the number of growers willing to engage in it and the number of such retailers has declined.

Relative to the two preceding marketing methods, a much greater volume is sold to wholesalers who, in turn, supply the retail trade. Such wholesalers may perform no other function than distribution, in which case washing, grading and packing is carried out by the farmer (and to some extent by the retailer); or,



may engage in processing-packing as well. Vegetable growers who carry out final consumer packing of their produce, - large growers of carrots and potatoes do this frequently -, sell to distributors as well as to retail establishments. Large volumes of fresh market vegetables are sold, however, by growers to processing-packing "houses," who wash, grade and pack the "field-run" product ready for retail merchandizing.

As indicated previously an increasing volume of fruits and vegetables are grown for processing and are purchased by Canadian processors. Growers, thus, also sell directly to processors. Such sales normally take place pursuant to contractual arrangements which specify such factors as grade and price. Contracts for growing vegetables usually are concluded in advance of seeding and planting and for fruits as much in advance of harvesting as possible.

With respect to the marketing methods outlined above, the grower is the seller and the price received by the grower is settled between the grower and the purchaser, whether that is the consumer, the retailer, the wholesaler, the packer or the processors. Increasingly, however, the grower does not sell on his own behalf, but his produce is sold on his behalf by marketing boards, organizations directed by growers and established for that purpose under provincial legislation. A list of all boards marketing fruits and vegetables, and the specific commodities regulated by each, is included in Appendix D.<sup>(1)</sup>

These marketing agencies may handle produce for the fresh market or for processing or both. Their main purpose is to provide centralized selling and in that role they negotiate with processors the prices to be paid to growers, and establish, on a daily or weekly basis, prices for the fresh market. Agencies marketing fresh market produce often wash, grade and pack the product as well. In order to promote orderly marketing, especially with respect to non-storable fruits which are consumed both fresh and processed, marketing boards may sell both the fresh market and the processing product. Inasmuch as processing is an essential aspect of orderly marketing, some boards operate their own processing facilities. And in the case of storable produce they also operate large storage plants.

In 1971, marketing boards had receipts of \$105 million,<sup>(2)</sup> or 35 per cent of total farm cash receipts of \$296 million. Excluding potatoes of which only a small proportion is sold through marketing boards, namely in British Columbia and Manitoba, these organizations marketed \$100 million in 1971 or 45 per cent of farm cash receipts. In 1974, marketing boards sold \$165 million of fruits and vegetables other than potatoes or 50 per cent of farm cash receipts.<sup>(3)</sup> It would appear therefore that producers' boards are becoming increasingly important in marketing fruits and vegetables. In 1971, board sales of fruits were equivalent to 59 per cent of total cash receipts

(1) See infra pp. 213-217.

(2) Study prepared by, Peter L. Arcus, Department of Agricultural Economics, University of British Columbia, p. 27.

(3) 1974-75 Marketing Board, Statistics Canada, Agriculture Canada.



by farmers and 37 per cent for vegetables; by 1974 the proportion for fruits dropped to 52 per cent, while that for vegetables, excluding potatoes, rose to 48 per cent.

Marketing boards are very prominent in British Columbia. In 1974, in this province, \$23 million of vegetables were sold by boards, or 71 per cent of provincial farm cash receipts for all vegetables. For fruits, this percentage was 56 per cent, although this proportion was much higher for tree fruits; in fact, tree fruits for processing are practically entirely sold through marketing boards.

Centralized marketing is also important in Ontario. In 1974, these agencies marketed vegetables, excluding potatoes, valued at \$65 million or 52 per cent of the total, when measured against farm cash receipts. For fruits the comparable figures are \$45 million or 68 per cent. Growers of fruits and vegetables in other provinces, notably Quebec and the Maritimes, sell only a small proportion of their output through marketing boards. In 1974, growers in Quebec and the Maritimes had total cash receipts from fruits and vegetables, excluding potatoes, totalling \$65 million; boards sold only \$2.8 million.

The Board has not investigated whether these marketing boards have been successful in raising the return to growers for the fruits and vegetables marketed on their behalf, and whether higher returns were obtained through more efficient marketing and at the expense of the middleman, i.e., the processor or independent wholesaler-packer, or at the expense of the consumer.

The growth in the importance of the major retailing chains and related wholesaler groups, and the associated concentration of buying power, provides an interesting parallel to the above-noted expansion of producer marketing boards. The Board has not found it possible to undertake a study in the depth required to analyse and properly assess the changes which have taken place at the wholesale-retail levels of distribution. It seems clear, however, that the ability to engage in large-scale buying of fresh and processed produce may well have exposed Canadian growers to progressively greater competition from external suppliers than heretofore.

#### PRODUCTION COSTS

Fruit and vegetable growers have been faced with rapidly increasing costs in recent years. An important consideration is whether these costs are higher or lower for Canadian growers than those in the United States, and whether these differences have been increasing or decreasing. This question will be discussed in this section with respect to a number of the more important cost elements such as labour, machinery and equipment, materials and land.

## Labour

Fruit and vegetable production is generally very labour intensive. Furthermore, because of its seasonal nature it does not provide year-round employment. Therefore, the industry is dependent on a large influx of labour, especially at harvesting time. One of the problems which this industry encountered in the past was a shortage of these seasonal workers; this problem has, at least in eastern Canada, been largely resolved by the federal program of bringing in workers from the West Indies. U.S. fruit and vegetable growers have benefited from migrant labour for a long time. Thus, the main problem today for the fruit and vegetable grower, relative to produce prices, is the cost of labour.

While there is no published information with respect to wage rates for employment in fruit and vegetable production in either Canada or the United States, wage rates for all hired farm workers are available for both countries, by province and by state. A comparison of these rates are believed to be a good indicator of the position of the horticultural industry in Canada as against the one in the United States with respect to labour costs.

In Canada, British Columbia growers are faced with considerably higher wage rates than growers in either Quebec or Ontario (Table 38). On the basis of 1976 average wage rates for all farm workers, British Columbia growers paid, in that year, 19 per cent more per hour than those in Ontario and 26 per cent more than growers in Quebec. Growers in the Maritimes appear to have the lowest hourly labour costs.

Wage rates for hired farm labour in Canada are, on average, higher than in the United States and have also increased more rapidly. Consequently the gap between the two countries, which was 21 cents per hour or 11 per cent higher in Canada in 1973, by 1976 had widened to 83 cents per hour or 32 per cent. On a regional basis, Ontario fruit and vegetable growers, relative to their competitors in the adjacent north-eastern states, paid about 39 per cent or 90 cents per hour more in 1976 than New York growers and some 26 per cent or 67 cents per hour more than New Jersey growers. The differentials compared with other north-eastern states fall within this 25-40 per cent range. For Quebec growers the disadvantage with respect to hourly labour costs in New York and New Jersey was 31 and 19 per cent respectively in 1976.

The same phenomenon is apparent on the West Coast comparing British Columbia with Washington, Oregon and California. Farm wage rates in British Columbia are higher than those in the Pacific States. In 1976, farm wage rates in British Columbia were 31 per cent or 91 cents per hour higher than those in Washington, 49 per cent or 1.27 per hour higher than in Oregon, and 25 per cent or 77 cents per hour higher than in California. In 1973, there was only a 16 per cent, or 33 cents per hour differential between the Oregon-Washington area and British Columbia, and California farm labour rates were in fact slightly higher.

Table 38: Hourly Wage Rates: Farm Workers, Canada and the United States; Selected Provinces and States, 1973-1976

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
	- \$/hr. -			
<u>Canada</u> <sup>(a)</sup>	2.12	2.51	2.98	3.36
Maritimes	1.75	2.14	2.55	2.89
Quebec	1.92	2.26	2.68	3.05
Ontario	2.16	2.52	2.91	3.23
Manitoba	2.10	2.52	3.05	3.55
Saskatchewan	2.14	2.59	3.20	3.70
Alberta	2.24	2.57	3.35	3.68
B.C.	2.39	2.95	3.34	3.85
<u>United States</u> <sup>(b)</sup>	1.91	2.13	2.29	2.53
New York )		1.94	2.20	2.33
New Jersey)	1.87	2.22	2.78	2.56
Michigan )		2.05	2.30	2.34
Ohio )	1.78	1.98	2.27	2.52
Wisconsin )		1.86	2.17	2.40
Oregon )	2.06	2.14	2.23	2.58
Washington )		2.22	2.72	2.94
California	2.44	2.74	2.77	3.08
Texas	1.84	1.98	2.08	2.40
Arizona	2.08	2.26	2.31	2.48

(a) August wage rate.

(b) July wage rate.

Source: Statistics Canada and the U.S. Department of Agriculture.

Higher labour costs are much more significant for hand-harvested, labour-intensive, crops, such as celery and peaches, than for a fully mechanized crop such as processing corn. For the former, labour costs may constitute as much as 50 per cent of total production costs per acre, and hence a 40 per cent differential could mean as much as a 20 per cent overall disadvantage. For processing corn, where labour costs represent between 5 and 10 per cent of production cost per acre, the higher hourly labour costs would add only 2-4 per cent overall. Higher Canadian labour costs will, of course, have an even greater impact on fruits and vegetables which are still mostly manually harvested in Canada, but which are usually mechanically harvested in the United States, for example, sour cherries and processing tomatoes.

The much higher farm wage rates in Canada will, undoubtedly, encourage more mechanization in Canada. The smaller scale of fruit and vegetable production in Canada will, however, mean that mechanization cannot be undertaken to the same extent as in the United States and that labour, hired or self-employed, will continue to be more important in Canadian horticulture.

### Machinery and Equipment

Fruit and vegetable growers in Canada and in the United States use a wide range of machinery and equipment such as seeders, planters, sprayers, harvesters, tractors, wagons, forklifts, etc. The annual cost of this machinery and equipment comprises depreciation costs, operating costs, and interest charges relative to the original purchase price.

The initial purchase cost of machinery and equipment used in fruit and vegetable growing is probably higher in Canada. Most of the equipment is manufactured in the United States, and even though it enters Canada free of duty and federal sales tax, the freight costs may result in a somewhat higher initial outlay for Canadian growers. Furthermore, dealer mark-ups are also believed to be somewhat higher in Canada. More important than the somewhat higher initial outlay, and the correspondingly higher annual depreciation costs, is the fact that the smaller scale of fruit and vegetable growing in Canada will result in higher depreciation costs per acre. The Royal Commission on Farm Machinery confirmed that this was so in 1969, and the Board is of the opinion that this disadvantage still exists. Moreover repair costs are higher as well, for both labour and replacement parts. On numerous occasions, throughout Canada, the matter of higher repair costs has been brought to the attention of the Board.

A significant component of operating costs is fuel. Fuel costs have, of course, increased sharply for growers in both countries. However, even though the average retail price in Canada is higher than in the United States, it can be seen that, when allowance is made for the tax rebate to farmers, the cost per gallon to Canadian farmers was several cents per gallon less in 1975 (Table 39). Provincial taxes are obviously higher than state taxes, even after allowance is made for the tax credit with respect to U.S. federal sales tax on gasoline of 4 cents per gallon. On the assumption that machinery and equipment is used as efficiently in Canada as in the United States, fuel costs per acre are probably somewhat lower for the Canadian fruit and vegetable grower.

While the Board was unable to obtain information which would allow it to indicate with some precision the difference in machinery and equipment costs per acre between the two countries it believes that it may be around 10 per cent higher in Canada for growers of beans, corn and peas for processing, many of whom have a scale of production not unlike their competitors in the northern states. The difference would appear to be higher for the manually harvested commodities because differences in scale of production between the two countries are probably greater. However, because machinery and equipment costs are a smaller component of total cost for labour-intensive fruits and vegetables, the impact of higher Canadian machinery and equipment expenses on total production costs will tend to be the same for all fruits and vegetables, less than 5 per cent.

Table 39: Gasoline Prices and Applicable State and Provincial Taxes in Canada and the United States, 1975<sup>(a)</sup>

	Average <u>Retail Price</u> <sup>(b)</sup>	State or Provincial <u>Sales Tax</u>	Retail Price less <u>Sales Tax</u>
- \$/Imperial gallon -			
<u>Canada</u> <sup>(c)</sup>			
Ontario	0.737	0.19	0.547
Quebec	0.709	0.19	0.519
British Columbia	0.701	0.17	0.531
<u>United States</u> <sup>(d)</sup>			
New York	0.676	0.10	0.576
Michigan	0.697	0.11	0.587
Ohio	0.648	0.08	0.568
Oregon	0.660	0.08	0.580
Washington	0.668	0.11	0.558
California	0.721	0.08	0.641

- (a) There is also a U.S. federal sales tax of 4¢ per gallon (4.8¢ per Imperial gallon); this tax may be claimed as an income tax deduction if gasoline used for agricultural purposes.
- (b) Retail price at filling station.
- (c) Prices shown are for Toronto, Montreal, and Vancouver.
- (d) Gas prices and taxes have been converted so as to be equivalent to larger Imperial gallon.

Source: Statistics Canada, U.S. Department of Agriculture and the U.S. Department of the Treasury.

### Materials and Supplies

Growers purchase a substantial amount of various materials and supplies, which individually may not be that important but together account for a significant proportion of total costs. Included in this category are such items as chemical fertilizers, agricultural chemicals and containers.

Chemical fertilizers are an important cost element; they may represent as much as 10 per cent of the total production costs for a crop such as processing beans or sweet corn. On the other hand, fertilizers contribute relatively less to overall production costs of most fresh market fruits and vegetables, where labour and container costs are more significant.

Canada is an important supplier of two basic fertilizers, namely those containing nitrogen and potash. Phosphate fertilizers are also produced in Canada, but from imported phosphate rock. The data in Appendix Table 75 show that fertilizer prices in 1969 were approximately the same in Canada as in the United States, with the exception of the Pacific Coast States where they were much higher. These statistics also reveal that, as the excess capacity of the 1960s disappeared and as supplies tightened and production costs rose during the early 1970s, fertilizer prices rose sharply in both countries. This rise was, at first, substantially greater in the United States, but this difference has largely disappeared as prices in that country rose less in 1971-75 and dropped more in 1975-76 than in Canada. This is demonstrated in the following table. It would appear, therefore, that fertilizer prices are usually about the same, or possibly somewhat lower in Canada than in the United States.

Table 40: Fertilizer Prices: Year-Over-Year Percentage  
Changes, Canada and the  
United States, 1971-75

	<u>Canada</u>	<u>United States</u>
	- per cent -	
1971/72	3.4	1.9
1972/73	12.1	11.4
1973/74	40.2	69.9
1974/75	26.4	14.6
1971/75	105.4	121.0

Source: Statistics Canada and the U.S. Department of Agriculture.

For agricultural chemicals such as insecticides and herbicides the cost may be as much as 8-10 per cent of the total cost of producing peaches. For most other crops it is, however, substantially less important. These materials are mostly manufactured in the United States, and therefore Canadian growers probably pay more for them than growers in the United States, if only because of transportation costs.



Fruits and vegetables for the fresh market are packed in cartons, wooden boxes, hampers, and 4-, 8- and 12-quart baskets. Container costs are, therefore, a very important element of total production costs for growers of these fruits and vegetables. The Board, on the basis of limited, evidence available to it, found that while some cartons were cheaper in Canada, they were smaller and, in fact, cost more per head or per pound of produce than in the United States. Container costs are, relative to total cost, negligible for producers of fruits and vegetables for processing.

### Land

Land use charges comprise a significant proportion of the total costs of production of fruit and vegetable crops. For the purpose of this discussion the out-of-pocket cost of land to the grower-owner consists of interest payments and property taxes. For the grower who leases land, costs consist of rent. The amount of out-of-pocket land-use costs actually incurred will vary greatly depending on when, at what price, and on what terms the owner originally purchased the land. The grower-owner who has recently purchased his land at the prevailing agricultural price will presumably have much higher land costs than the fully paid-up grower, not only because the price of land has risen, but also because of higher interest rates.

The Board was unable to obtain reliable information on the value or price of land used for fruit and vegetable growing in Canada and in the United States, and thus could not determine whether there is a difference in this regard between the two countries. Consideration was, instead, given to such factors which would lead to higher land values in Canada than in the United States, or vice versa. One element of land utilization that affects land values is the number of crops. For deciduous tree fruits and all small fruits, with the exception of strawberries, where California grows the everbearing varieties, there is, in both countries, one crop per year only and hence no advantage to either.

With respect to vegetables, however, there are regions in the United States which produce two or more crops, while Canadian growers have one crop only. This would suggest generally higher land costs for the Canadian grower. Not all vegetable growers in Canada, however, encounter this disadvantage. For instance most snap beans, sweet corn, and peas for processing and potatoes are also grown in the United States in one-crop regions. Moreover, a large proportion of the U.S. summer and fall crop of fresh market vegetables is grown in these more northern states as well. On the other hand, California, with its two or more crops, would tend to have an advantage related to land-use costs over Canadian growers of storable vegetables and such crops as processing tomatoes.

Another aspect which could affect the position of the two countries with respect to land values for fruit and vegetable growing is differences in yields. Lower yielding land will normally be less valuable than land with high yields. On the basis of this criterion it would appear that land values would be higher in the United States.

All evidence points in the direction of higher yields in that country, Appendix Table 76. Land use and yields suggest therefore that the value of land per acre for horticulture might be expected to be somewhat higher in the United States. Moreover, mortgage rates available to farmers have usually been at least as high in that country as well (see Table 41). Consequently, on balance it would appear that land use costs, for the production of fruits and vegetables, might be, on average, lower in Canada than in the United States.

### Interest Rates

Interest costs, as in any business, are also important in fruit and vegetable growing. Whether they are higher or lower for Canadian growers depends on two factors; first the average amount of outstanding debt, and secondly, the interest rate. Inasmuch as information with respect to the amount of outstanding debt in fruit and vegetable growing is not available, this section will be confined to interest rates.

Farmers, and hence fruit and vegetable growers, have access in both countries to financing on preferential terms. In Canada, there is for instance the financing provided by the Farm Credit Corporation, and in the United States, by the Federal Land Bank. A portion of the growers' credit requirements, usually short-term, is also met by commercial financial institutions at prevailing commercial interest rates. Table 41 brings together some of the interest rates which growers are likely to pay in Canada and the United States. It is evident from this that interest rates paid by farmers for long-term financing to the Farm Credit Corporation are usually about the same as those paid to the Federal Land Bank in the United States. Interest rates for credit, other than long-term, would appear to be somewhat higher in Canada. It would appear therefore, that total interest charges, assuming that the amount of outstanding debt is the same, are, on average, somewhat higher for Canadian fruit and vegetable growers.

Table 41: Farm Credit: Average Rates on New Loans, Canada and the United States, 1971-75

	United States			Canada			
	Federal Land Bank	Production Credit Association	Commercial Banks	Long- Term <sup>(a)</sup>	Inter- mediate Term <sup>(b)</sup>	Short Term <sup>(b)</sup>	Commercial Banks
	- per cent -			- per cent -			
1971	7.9	7.3	6.4	7.5	8.3	9.3	6.9
1972	7.4	7.0	6.0	7.0	9.1	8.5	6.4
1973	7.5	8.1	8.5	7.0	10.0	10.3	7.9
1974	8.1	9.4	11.5	8.8	11.0	11.2	11.2
1975	8.7	8.9	8.9	8.8	..	..	9.8

(a) Farm Credit Corporation rates.

(b) Average rates as charged to farmer by banks, trust companies, finance companies, credit unions, private individuals, etc.

Source: Bank of Canada, Farm Credit Corporation, U.S. Department of Agriculture and the U.S. Federal Reserve Bank.

### Unit Costs of Production

The preceding discussion indicates that on average the total cost of producing an acre of fruit and vegetables is considerably higher in Canada than in the United States on the basis of much higher labour costs, moderately higher machinery and equipment costs, and somewhat higher costs for materials and supplies and interest charges. Moreover, it was also noted that this difference in overall production costs was likely to be greater for the hand-harvested fruits and vegetables than for mechanically harvested ones, especially vegetables grown for processing. Furthermore, it was pointed out that this cost gap has widened in recent years, primarily because labour costs have risen more rapidly in Canada.

Higher Canadian per acre costs will result in an even greater disadvantage in terms of costs per pound if Canadian growers produce less per acre than their U.S. competitors. Unfortunately, relevant U.S. data are available only for vegetables and a number of small fruits, and not for tree fruits. With respect to the vegetables and the fruits for which yields in both countries could be calculated, Appendix Table 76, yields were, on average, indeed lower in Canada for most crops; cauliflower and cucumbers were exceptions. The Board gained the impression from its studies that yields for tree fruits were also lower on average in Canada. This situation does not apply equally to all regions. For instance, Ontario growers realize yields for a number of vegetables that compare very favourably with yields in the United States. On the other hand, while British Columbia fruit growers, have the highest yields in Canada, they are, unable to match the yields attained in the nearby, highly productive, Pacific Coast States.

It can, reasonably, be concluded that, with few exceptions, the unit cost of producing fruits and vegetables are higher for Canadian growers. The extent of this disadvantage, evidently, differs from commodity to commodity. The Board has recognized these differences in its tariff recommendations.

### CHAPTER III: SUMMARY OF PROPOSALS FROM INTERESTED PARTIES

The full details of all proposals, requests and suggestions with respect to the tariff schedule on fresh fruits and vegetables are contained in the individual submissions and in the transcript of the public sittings, which are available from the Board. This chapter contains a summary of the proposals brought before the Board pertaining to the central tariff issues.

#### Consumers' Association of Canada

The Consumers' Association of Canada (CAC), a voluntary, non-profit organization of 110,000 members throughout Canada asserted that tariff protection should be the minimum necessary to maintain efficient production of fresh and processed fruits and vegetables in Canada. With regard to fresh fruits and vegetables, such protection should consist of the lowest possible effective tariffs while Canadian grown products are being marketed and free entry when Canadian produce is not available. The CAC recognized, however, that a severe problem may arise for Canadian growers as a result of low-priced imports, or the threat of such imports, immediately preceding or during the season when Canadian produce is being marketed. The CAC indicated that in its view it is in the long-term interests of Canadian consumers to preserve a competitive domestic fruit and vegetable industry and to enable ordinarily viable domestic producers to continue operations through periods of excess foreign supply. It therefore agreed with The Canadian Horticultural Council that some means of protection should be provided against such situations. The formula involved in providing this emergency protection should be carefully evaluated by the Tariff Board, and steps should be taken to ensure that protective measures are also available to consumers against unduly high prices in periods of short supply.

Greater attention should be paid to market promotion techniques as a means of expanding the Canadian market for domestic fresh fruit and vegetables, since in the absence of such promotion, the industry may lose markets to imports and seek higher tariffs.

According to the CAC, the viability of the Canadian processing industry should not be impaired by an insufficient supply of fresh fruits and vegetables for processing. Imports of fresh produce for processing should therefore be permitted free of duty whenever domestic supplies are unavailable or insufficient.

The CAC also felt that the existing three tariff regions might be prejudicial to consumer interests, in the sense that protection might be provided to producers in one part of the region at the expense of those in other parts of the same region. It was recommended that a study be undertaken of this problem to determine whether the establishment of more tariff zones might not better serve the interests of all Canadians.

#### Canadian Horticultural Council, The

The Canadian Horticultural Council, which is made up of approximately 45 grower organizations, is a member of the Canadian

Federation of Agriculture and represents the interests of all growers of horticultural crops across Canada. Two member organizations of the Council, namely the Ontario Greenhouse Vegetable Producers' Marketing Board and the Canadian Mushroom Growers' Association, made separate representations to the Tariff Board respecting their own particular commodities.

The Council emphasized a number of developments in the horticultural industry. Canadian grown produce has been filling a smaller and smaller share of Canadian demand for many important horticultural products. The Council linked this decline in "self-sufficiency" directly to the diminishing level of ad valorem protection provided by specific duties during a period of generally rising produce prices.<sup>(1)</sup> Consequently, they proposed the introduction, in addition to a specific duty, of a minimum ad valorem rate for the purpose of preventing such erosion in the level of protection in the future.

The Council generally sought larger specific duties and higher ad valorem levels of protection; the minimum ad valorem rate proposed was in most instances 20 per cent M.F.N., a level more often than not above the current ad valorem equivalent of the specific duty. Increased protection was requested only during the period when Canadian produce is available, the increase in seasonal protection to be offset by the abolition of existing off-season duties. A list of the Council's recommendations on nomenclature and rates for all individual fresh fruits and vegetables is presented in Appendix B. The Council also proposed that, in accordance with a predetermined formula, seasonal duties could be waived in the event that domestic prices of fresh fruits and vegetables rose above certain levels.

The Canadian Horticultural Council, although it proposed the removal of existing off-season duties, thus reducing the total dutiable period for the relevant fruits and vegetables, also requested that the maximum period for the application of the seasonal duty be extended for most commodities where this would be applicable. In explaining the need for an earlier application of the seasonal duty and an increased number of weeks of coverage, the Council drew attention to the fact that Canadian fruits and vegetables in the natural seasonal progression of harvesting on the North American continent are the last to mature and reach the market. As a result, Canadian products come to market when U.S. production has peaked and prices are reaching their seasonal lows, when U.S. growers have marketed most of their output and covered a large proportion of their costs of production and can thus clear their supplies with greater flexibility on price.

Canadian growers, as a result of this downward pressure from south of the border, do not have the advantage of high early season prices and must, frequently, compete with imports which represent the completion of the marketing season for U.S. growers. Another factor underlying the Council's request for a longer maximum period for application of the seasonal duty is the development of improved storage facilities which has extended the storage period and hence the length of time during which Canadian supplies of storable fruits and vegetables are available on the domestic market.

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(1) That is, a specific duty of 1 cent per pound on a product selling at 5 cents per pound has an ad valorem effect of 20 per cent protection, but if the price rises to 10 cents per pound, the ad valorem protection falls to 10 per cent, and so on - until it may and sometimes has become lower than the off-season ad valorem duty.



The Council requested that the present additional packaging duty on imports of fresh vegetables when imported in individual consumer packs weighing 5 pounds or less be raised from 5 p.c. to 10 p.c. and that the vegetables subject to this additional duty be increased from eight to thirteen.

Finally, the Council made suggestions for an automatic system to deal with the problem of imports or the threat of imports at distress prices. The Council proposed that minimum average import values be declared before the beginning of the marketing season, and that distress-priced imports would be liable for a surtax, over and above the normal seasonal duty, in the amount of the difference between the f.o.b. value of the particular imports and the declared minimum average import value.

#### Canadian Food Processors Association

The Canadian Food Processors Association (CFPA) is a national organization representing about one hundred member firms, most of which are engaged primarily in canning and freezing fruits and vegetables, though some are also engaged in producing other processed food products. Its membership includes most of the major establishments producing fruit and vegetable products in Canada, and the Association claims that its members account for approximately 85 to 90 per cent of the volume of fruits and vegetables processed in Canada.

The CFPA proposed that in the event that particular fresh fruits and vegetables cannot be grown efficiently in Canada then the tariff on such products should be reduced or eliminated when imported for processing. Furthermore, when Canadian growers cannot meet the requirements of Canadian processors, and fresh products have to be imported to keep plants operating, the duty should be remitted. This could be done, according to the CFPA, through the present remission of duty procedures, with certain improvements, or by a program similar to the Machinery Program administered by the Department of Industry, Trade and Commerce.

In response to the request for generally higher levels of protection on fresh fruits and vegetables by The Canadian Horticultural Council, the CFPA proposed that separate tariff items be established for fruits and vegetables when imported by processors for processing. The rate requested by the CFPA for produce imported for processing was in all instances 10 p.c. M.F.N., a rate usually well below that proposed by the Council.

The Association also expressed the view that if surtaxes are imposed on foreign fresh fruits and vegetables offered for sale in Canada at distress prices, then a surtax should be levied as well on semi-processed or processed products produced from these raw materials when they are imported.



### Canadian Importers Association Inc.

This Association represents firms engaged in importing and distributing fresh and processed fruits and vegetables throughout Canada. The Association was of the opinion that the existing degree of tariff protection was adequate and proposed a reduction of all M.F.N. rates of duty exceeding a level of 15 p.c. It also suggested that customs duties on imports of fruits and vegetables of a kind not produced in Canada be eliminated.

With respect to measures to counter the adverse effects on producers of low-priced imports, the Association felt that the present provisions for the imposition of a surtax by Order-in-Council were adequate. In the event that surtax on a fresh fruit and vegetable created problems for processors then assistance to growers could be provided through price and income support under the Agricultural Stabilization Act, supplemented by import controls under the Export and Import Permits Act.

### Canadian Fruit Wholesalers' Association

The Canadian Fruit Wholesalers' Association represents wholesalers and brokers of domestic and imported fresh fruits and vegetables throughout Canada. The Association estimates that its members handle about 90 per cent of all fresh fruits and vegetables sold at both the wholesale and retail levels in Canada.

The Association supported the general submission of The Canadian Horticultural Council to the Tariff Board. In addition, the Association was in agreement with the majority of the tariff proposals made by the Council with respect to most individual fruits and vegetables. It proposed however that field-grown and greenhouse tomatoes be treated under separate tariff items and that the existing duties on plums, nectarines and grapes should remain as they are.

Concerning the Council's surtax proposal, which they agree is necessary in some form, the wholesalers warned of potential administrative problems, and indicated willingness to retain the present procedures for establishing a surtax.

### National Farmers Union

The National Farmers Union (NFU) represents about 25,000 family farm operations in eight provinces. The NFU pointed out that the desirability of an expanding food industry is based not only on economic criteria but also on certain "political" value judgments such as the advisability of being totally dependent on imports for certain kinds of food. It stated that the existing level of protection with respect to fruits and vegetables was generally deficient, in that it does not provide protection against the fact that prices in the United States frequently have reached their seasonal lows just when Canadian growers come to market. The NFU also was of the opinion that action against low-priced imports has been inadequate. Price support has been too little and too late. The NFU proposed that a system of variable levies be substituted for the present tariff structure as applied to fruits and vegetables. It was also proposed that the

revenues from the variable levies collected by the Department of National Revenue should accrue to a fund to be used for stabilizing grower prices of fruits and vegetables in Canada.

#### Ontario Greenhouse Vegetable Producers' Marketing Board

The Ontario Greenhouse Vegetable Producers' Marketing Board represents most Ontario producers of vegetables grown in greenhouses or hothouses. Tomatoes and cucumbers are the two most relevant vegetables, in that they account for more than 98 per cent of all greenhouse vegetable production in Canada, and are also relatively important with regard to field production of these vegetables.

The Board's submission emphasized that labour and heating costs have increased very greatly since the Tariff Board's Report on Reference No. 140, - Greenhouse Vegetables -, was tabled. These higher costs, despite the application of new and improved technology, as well as the increase in the value of the Canadian dollar as against the U.S. dollar, and the growing differential in capital costs between the two countries, have placed the Canadian growers of greenhouse vegetables at a substantial disadvantage in relation to U.S. greenhouse operators and at an increasing disadvantage in relation to U.S. and Mexican field-grown tomatoes.

It was pointed out that, while costs of production have escalated, the ad valorem protection offered by the specific duty has diminished substantially as prices increased. Moreover, the application of the maximum period of the specific duty in the case of tomatoes has not been such as to afford protection to greenhouse operators.

The Marketing Board, a member of The Canadian Horticultural Council, supported the latter's proposals with respect to tomatoes and cucumbers and its proposals for countering distress-priced imports with a surtax whenever import values fall below a predetermined floor price. Separate floor prices would need to be established, in the Board's view, for greenhouse as opposed to field grown vegetables.

#### Northwest Horticultural Council, (U.S.)

The Northwest Horticultural Council submitted the following views on behalf of more than 7,500 growers of fresh deciduous fruits in the States of Washington and Oregon.

The Council was opposed to any proposals to increase duties or other barriers to trade. Such proposals were stated to be contrary to the trend toward greater liberalization in trade which has prevailed in recent years. Raising or increasing barriers would create hard feelings among U.S. producers and would invite moves toward reciprocal retaliation. The generally harmonious relations which have prevailed in recent years between growers of apples and other deciduous fruits in the United States and growers in Canada would be seriously damaged if such proposals were implemented.

The Northwest Horticultural Council also expressed its opposition to the surtax action taken by the Canadian government in

1973 on sweet cherries. The Council claimed that the prices at which U.S. cherries were being sold in Canada, at that time, exceeded the cost of production and were not unreasonably low. The imposition of this restriction, considered by them to have been in violation of GATT, was alleged to have resulted in a lower volume of U.S. cherries being shipped to Canada.

#### California Grape & Tree Fruit League

The League represents growers and shippers of California fresh grapes and deciduous tree fruits for intra, interstate and international commerce. A statement was submitted on its behalf with respect to the Tariff Board's review of the tariff on fresh apricots, sweet cherries, grapes, peaches, pears, plums, and nectarines. The League argued that the existing import duties on these fruits, when combined with the cost of transporting California fresh fruit to Canadian markets, are at a level that maintains preferential access for Canadian growers to Canadian markets and that they should not be changed.

## CHAPTER IV: TARIFF ISSUES

### GENERAL LEVEL OF PROTECTION

During 1975, the latest year for which data are available, the aggregate value of all fruits and vegetables imported into Canada in both fresh and processed forms amounted to approximately \$779 million, or 2.2 per cent of the value of all imports (see Table 1). During the same period, revenues from import duties on fruits and vegetables entering Canada amounted to about \$32 million, or 1.6 per cent of all such receipts. Expressed in ad valorem terms, the average duty on all imports of fruits and vegetables (dutiable and non-dutiable) amounted to 4.1 per cent, while the corresponding figure with respect to imports in general was 5.6 per cent. Thus, the degree of tariff protection afforded to the growing and processing of fruits and vegetables is noticeably lower than that accorded Canadian production at large.

Traditionally, in Canada, as in most other countries, a greater degree of tariff protection has been extended to manufacturing industry than to primary production. Thus, about 45 per cent of Canadian manufacturing activity is still protected by nominal tariff rates of more than 10 per cent; and, as may be seen from Table 1, among imports of horticultural commodities, processed fruits and vegetables are generally more liable to duty than are fresh products. With respect to such commodities, average rates of duty in 1975 ranged downward from 12.1 p.c. in the case of miscellaneous processed products containing fruits or vegetables to 0.9 p.c. in the case of fresh fruits (the bulk of which were not dutiable).

The degree of protection provided by the tariff in general and with respect to fresh and processed fruits and vegetables has noticeably declined during the period under study. Referring to Table 1, it will be seen that whereas in 1961 some 54 per cent of total Canadian imports by value were dutiable, in 1975 the corresponding proportion was 37 per cent. Clearly, this movement in the direction of freer trade owed much to the liberalization policies pursued under the General Agreement on Tariffs and Trade (GATT). However, in this connection, it may be noted that, while imports of fresh fruits were dramatically affected by the removal of tariff restrictions (less than 9 per cent by value remaining dutiable in 1975), 44 per cent of the value of all fruit and vegetable imports remained subject to duty in this year - a significantly higher proportion than the 37 per cent cited above for imports in general, although a markedly lower proportion than the 61 per cent recorded in 1961. In the case of processed vegetables and, to a lesser extent, processed fruits, the overwhelming proportion of imports remained subject to duty throughout the period in question.

Of course, in general terms, trade liberalization has been effected not only by increasing the number of duty-free items but also by decreasing the rates of duty on many of the remaining dutiable imports. Thus, in 1975 the duty collected on all dutiable imports entering Canada averaged 15.0 per cent of value, compared with 17.4 per cent in 1961. For fruit and vegetable products as a

whole the corresponding figures were 9.4 per cent and 12.4 per cent respectively. Somewhat surprisingly, perhaps, while (as already noted) the proportion of fresh fruit imports subject to duty declined drastically, the average tariff on those remaining dutiable changed comparatively little in ad valorem terms. Moreover, during the latter part of the period under review this average tariff generally exceeded that imposed on imports of processed fruits, thereby providing an apparent exception to the general principle already enunciated, whereby manufactured products normally carry a higher rate of duty than their raw material ingredients. The explanation in this case would seem to hinge partly upon the fact that a higher proportion of processed fruits than of fresh fruits is obtained from Commonwealth countries - notably Australia, New Zealand and the Union of South Africa - at preferential rates of duty. There is, of course, the further consideration of possible differences between the composition of fruits imported in fresh condition and those admitted in processed form.

Not all of the decline in the level of protection illustrated in Table 1 has been due to multinational trade liberalization policies or to changes in the composition of imports. Price changes and budgetary measures have also played a part. Consequent upon the general upward movement of prices beginning in the early years of the present decade, the reduction in the level of protection accorded to commodities subject to specific (or fixed) duties has apparently been greater than originally foreseen. In the case of imports into Canada, such duties have been applied mainly to spirits, tobaccos, sugars and a number of agricultural products, including most fruits and vegetables. Thus, if reference is made to Table 1, it will be seen that, in proportion to dutiable value, the average import duty on fruits and vegetables in 1975 was only about 85 per cent of what it had been in 1966, whereas the corresponding figure with respect to total imports was 91 per cent. The conclusion contained in the Minister's letter of reference to the Chairman of the Board, dated July 6, 1973, that "many of the present tariff provisions for fresh and processed fruits and vegetables" are "inadequate and out of date" makes it clear that a decline of the former order of magnitude was not anticipated. In part, however, this relative decline in the level of protection extended to horticultural commodities was heightened by the tariff cuts effected in the budgets of 1973 and subsequent years as part of the federal government's attempts to reduce the upward pressure on consumer prices. These cuts affected a number of fruit and vegetable products, especially those subject to out-of-season ad valorem duties (see Tables 2a and 2b).

The present widespread concern over the problem of inflation and its adverse effects upon society as a whole, together with the continuing tendencies towards liberalization in the sphere of international trade, are cogent factors which the Board has been unable to ignore during the course of its deliberations. It has been felt necessary to weigh very carefully the expected benefits of any additional protection proposed for producers against the inflationary effects of increased duties upon consumer prices. Accordingly, in establishing a general position regarding the most appropriate overall level of protection in relation to products encompassed by this Reference, the Board concluded that while (due to the erosion of the



Table 1: Value of Total Canadian Imports of All Commodities and of Imports of Fruits and Vegetables, Selected Years, 1961-1975

Imports	Value of Imports				Duty Collected		
	Dutiable	Free		Total	Total	As % of Value of:	
		- \$'000 -				Dutiable Imports	Total Imports
					\$'000	%	%
<b>All Commodities</b>							
1961	3,115,408	2,653,170		5,768,578	542,838	17.4	9.4
1966	4,831,709	5,034,730		9,866,439	794,072	16.4	8.0
1971	6,533,682	9,077,589		15,611,271	1,008,436	15.4	6.5
1972	8,022,833	10,646,593		18,669,426	1,244,276	15.5	6.7
1973	9,525,476	13,798,018		23,323,493	1,442,813	15.1	6.2
1974	13,012,691	18,679,429		31,692,121	1,925,318	14.8	6.1
1975	12,967,329	21,668,184		34,635,513	1,950,134	15.0	5.6
<b>Fresh Fruits</b>							
1961	40,736	57,236		97,971	3,363	8.3	3.4
1966	50,311	71,247		121,558	3,684	7.3	3.0
1971	47,159	118,888		166,046	3,876	8.2	2.3
1972	52,674	128,349		181,024	3,945	7.5	2.2
1973	16,738	196,996		213,733	1,264	7.6	0.6
1974	37,896	194,523		232,418	3,011	7.9	1.3
1975	24,313	249,856		274,169	2,390	9.8	0.9
<b>Fresh Vegetables</b>							
1961	28,298	19,705		48,003	4,487	15.9	9.3
1966	43,827	31,074		74,900	5,758	13.1	7.7
1971	44,624	56,170		100,789	5,697	12.8	5.7
1972	53,551	60,899		114,449	6,501	12.1	5.7
1973	55,940	94,583		150,526	5,689	10.2	3.8
1974	76,144	87,602		163,741	7,671	10.1	4.7
1975	81,239	112,838		194,080	8,147	10.0	4.2



Table 1: Value of Total Canadian Imports of All Commodities and of Imports of Fruits and Vegetables, Selected Years, 1961-1975 (cont.)

	Value of Imports			Duty Collected		
	Dutiable	Free	Total	As % of Value of:		Total Imports %
				Dutiable Imports	Total Imports	
Imports:						
Processed Fruits						
1961	55,817	16,609	72,426	77.1	6,423	8.9
1966	57,264	21,296	78,560	72.9	6,087	7.7
1971	69,524	28,103	97,624	71.2	5,699	5.8
1972	77,965	31,230	109,196	71.4	6,069	5.6
1973	61,050	84,688	145,731	41.9	5,364	3.7
1974	91,350	63,832	155,183	58.9	6,862	4.4
1975	108,916	65,855	174,765	62.3	7,230	4.1
Processed Vegetables						
1961	17,600	533	18,134	97.1	2,875	15.9
1966	24,497	560	25,057	97.8	3,382	13.5
1971	32,512	2,954	35,466	91.7	4,494	12.7
1972	41,526	3,469	44,995	92.3	5,744	12.8
1973	56,563	3,920	60,482	93.5	6,758	11.2
1974	92,749	5,080	97,826	94.8	9,241	9.4
1975	86,975	3,977	90,954	95.6	8,940	9.8

Table 1: Value of Total Canadian Imports of All Commodities and of Imports of Fruits and Vegetables, Selected Years, 1961-1975 (concl.)

	Value of Imports			Duty Collected		
	Dutiable	Free		Total	As % of Value of:	
		- \$'000 -			Dutiable Imports	Total Imports
				Total	%	%
<b>Imports:</b>						
Miscellaneous Processed						
Products Containing (a)						
Fruits or Vegetables						
1961	6,989	472	7,461	1,312	18.8	17.6
1966	11,447	331	11,777	2,070	18.1	17.6
1971	19,415	1,122	20,538	2,819	14.5	13.7
1972	25,833	1,319	27,153	3,806	14.7	14.0
1973	28,647	2,565	31,211	3,566	12.4	11.4
1974	31,997	2,665	34,661	4,073	12.7	11.8
1975	42,052	2,766	44,818	5,423	12.9	12.1
<b>Grand Total:</b>						
Fruits and Vegetables						
1961	149,440	94,555	243,995	18,459	12.4	7.6
1966	187,345	124,507	311,852	20,981	11.2	6.7
1971	213,234	207,237	420,463	22,585	10.6	5.4
1972	251,549	225,266	476,817	26,065	10.4	5.5
1973	218,938	382,752	601,683	22,641	10.3	3.8
1974	330,136	353,702	683,829	30,858	9.3	4.5
1975	343,495	435,292	778,786	32,130	9.4	4.1

(a) Excludes alcoholic wines.

Source: Statistics Canada.

Table 2a: Fresh Vegetables: Budgetary Changes in Tariff Rates, by Tariff Item, (a) 1973-1976

Tariff Item	Commodity (b) <u>Commodity</u>	B.P. Pre-1973 to 1976	M.F.N. and General				
			Feb. 20, 1973	Feb. 20, 1974	July 1, 1974	Nov. 19, 1974 to 1976	
			Pre-1973 - Rate of Duty: cents per pound or percentage -				
<u>Fresh Vegetables</u>							
8702-1	Asparagus	Free	3½¢ (14 wk) 10 p.c.	3½¢ (14 wk) Free	3½¢ (14 wk) 10 p.c.	(c)	
8704-1	Beets	Free	1¢ (26 wk) 10 p.c.	(d) 1¢ (26 wk) Free	(d) 1¢ (26 wk) 10 p.c.	1¢ (26 wk) Free <sup>(e)</sup>	
8705-1	Brussels Sprouts	Free	3¢ (16 wk) 10 p.c., Free	(d) 3¢ (16 wk) Free	(d) 3¢ (16 wk) 10 p.c., Free	(c)	
8706-1	Cabbage	Free	9/10¢ (30 wk) 10 p.c., Free	9/10¢ (30 wk) Free	(c)	9/10¢ (30 wk) Free <sup>(e)</sup>	
8708-1	Cauliflower	Free	¾¢ (20 wk) 10 p.c. Free	(d) ¾¢ (20 wk) Free	(c)	(c)	
8712-1	Cucumbers, n.o.p.	Free	2¼¢ (22 wk) 10 p.c.	2¼¢ (22 wk) Free	2¼¢ (22 wk) 10 p.c.	(c)	
8717-1	Onions, n.o.p.	Free	1½¢ (44 wk) 10 p.c.	1½¢ (44 wk) Free	(c)	1½¢ (44 wk) Free <sup>(e)</sup>	
8728-1	Onions, Green	Free	1½¢ (44 wk) 5 p.c. (f)	1½¢ (44 wk) Free	(c)	1½¢ (44 wk) Free <sup>(e)</sup>	
8720-1	Peas, Green	Free	2¢ (12 wk) 10 p.c., Free	(d) 2¢ (12 wk) Free	(c)	2¢ (12 wk) Free <sup>(e)</sup>	

Table 2a: Fresh Vegetables: Budgetary Changes in Tariff Rates, by Tariff Item, (a) 1973-1976 (concl.)

Tariff Item	Commodity (b)	M.F.N. and General				
		B.P. Pre-1973 to 1976	Feb. 20, 1973	Feb. 20, 1974	July 1, 1974	Nov. 19, 1974 to 1976
Fresh Vegetables						
- Rate of Duty: cents per pound or percentage -						
8722-1	Rhubarb	Free	$\frac{1}{2}\text{¢}$ (10 wk) 10 p.c.	$\frac{1}{2}\text{¢}$ (10 wk) Free (c)	$\frac{1}{2}\text{¢}$ (10 wk) Free(e)	
8724-1	Tomatoes	Free	$1\frac{1}{2}\text{¢}$ (32 wk) 10 p.c. Free	$1\frac{1}{2}\text{¢}$ (32 wk) Free 10 p.c., Free (c)	(c)	

(a) Excludes those tariff items which were not subject to change.

(b) For a more complete description of the pertinent tariff items, see Appendix A.

(c) No change from previous Budget Resolution.

(d) As of April 1959, packages weighing 5 lb. or less have been subject to an additional duty of 5 p.c. M.F.N., 10 p.c. Gen. whenever specific rates of duty have been in effect.

(e) Extended to June 30, 1977.

(f) 10 p.c. under the General Tariff.

Source: Canadian Customs Tariff.

Table 2b: Fresh Fruits: Budgetary Changes in Tariff Rates, by Tariff Item, (a) 1973-1976

Tariff Item	Commodity (b)	B.P.	M.F.N. and General						
		Pre-1973 to 1976	Pre-1973	Feb. 20, 1973	Jan. 9, 1974	Feb. 20, 1974	July 1, 1974	Nov. 19, 1974 to 1976	
			- Rate of Duty: cents per pound or percentage -						
	<u>Fresh Fruits</u>								
9203-1	Cherries, sweet	Free	2¢ (7 wk) 10 p.c.	2¢ (7 wk) Free	(c)	2¢ (7 wk) 10 p.c.	(c)	(c)	
9204-1	Cranberries	Free	5 p.c. (f)	(c)	(c)	(c)	5 p.c. (d) (f)	5 p.c. (d) (f)	
9205-1	Peaches	Free	1½¢ (14 wk) 10 p.c., Free	1½¢ (14 wk) Free	(c)	(c)	1½¢ (14 wk) 10 p.c., Free	(c)	
9206-1	Pears	Free	1¢ (22 wk) 10 p.c., Free	1¢ (22 wk) Free	1¢ (22 wk) 10 p.c., Free	(c)	(c)	(c)	
9210-1	Raspberries and Loganberries	Free	2¢ (6 wk) 10 p.c.	2¢ (6 wk) Free	(c)	(c)	2¢ (6 wk) 10 p.c.	2¢ (6 wk) Free (e)	
9211-1	Strawberries	Free	1 3/5¢ (6 wk) 10 p.c., Free	1 3/5¢ (6 wk) Free	(c)	1 3/5¢ (6 wk) 10 p.c., Free	(c)	(c)	

(a) Excludes those tariff items which were not subject to change.

(b) For a more complete description of the pertinent tariff items, see Appendix A.

(c) No change from previous Budget Resolution.

(d) Free under the Most-Favoured-Nation Tariff from November 1, 1974 to December 31, 1974.

(e) Extended to June 30, 1977.

(f) 10 p.c. under the General Tariff with no budgetary change.

Source: Canadian Customs Tariff.

protection afforded by specific duties) some upward adjustment would seem called for, this should be moderate in extent. In general, the level of protection prevailing in the middle 1960s has been taken by the Board as constituting an upper limit in fixing the rate of duty on individual commodities. In more precise terms, the Board has been extremely reluctant to recommend ad valorem (or equivalent) duties in excess of 15 p.c. on fresh produce.

In favouring a course of moderation with respect to recommended tariff increases, the Board has been reinforced in its attitude by a number of considerations which, taken together, seem to suggest fairly strongly that the actual decline in the level of protection as protested by the industry, has been exaggerated. The protection of domestic industry against the impact of foreign competition hinges, of course, upon more than the erection of an appropriate structure of tariff rates. Traditionally, the most effective form of protection has been that provided by natural physical barriers and distance. In its reviews of the landed costs of imported fresh market products falling within the scope of this Reference, the Board has been struck again and again by the much greater proportionate importance of freight and associated charges than of import duties. This has led to the conclusion that a comparatively modest increase in such charges could, in some instances, more than offset an apparently significant loss of protection with respect to tariff items subject to specific duties during a period of inflation. Indeed, evidence supplied to the Board indicates that freight and associated charges have risen substantially in recent years and, given the tightening situation in relation to energy supplies, the relative importance of these costs, and the degree of protection thereby afforded to domestic producers, could well increase in the future. In making this judgment, the Board, of course, recognizes that rising freight rates are unlikely to provide much, if any, net additional protection to those domestic producers of commodities such as potatoes or apples who supply distant extra-regional markets within Canada.

In the context of the present Reference, the problems posed by the application of specific duties during times of inflation are of primary relevance in relation to the importation of fresh horticultural produce. However, contrary to what may possibly have been expected, the Board has observed that in the case of approximately half of the tariff items pertaining to fresh fruits and vegetables, the volume of dutiable imports actually declined between 1966-70 and 1975. In the light of the relative decline in the value of dutiable imports indicated in Table 1 - both in general terms, and with reference to the fresh fruit and vegetable sectors - this finding should not really cause surprise. Doubtless, part of the explanation is to be found in the general lowering of tariffs in the sphere of international trade, already discussed, and part is attributable to the budgetary changes summarized in Tables 2a and 2b, which reduced the length of the total dutiable period for certain fruit and vegetable items. In the case of most of these fresh market products, therefore, a decline in the volume of dutiable imports has not meant an absolute reduction in imports during the Canadian production season. In fact, in-season imports have generally increased at a more rapid rate than imports during the off-season. The level of import penetration, however, rose mostly and was greatest during the "shoulder" months, at the beginning and end of the Canadian marketing period, and not



when the bulk of the domestic crop comes to market. Accordingly, after reviewing these various considerations, the Board is left with the feeling that import penetration resulting from the erosion of the protection afforded by specific duties has not, in general, been such as to undermine severely the position of domestic producers during the main Canadian growing season.

This feeling gains support from a review of wholesale-to-retail price data pertaining to the fresh market sale of domestic and imported fruits and vegetables in a number of major Canadian marketing centres. From such data, collected by the Board during the course of a survey in 1974, it emerges that at the peak of the Canadian marketing season, prices of foreign-grown commodities are frequently not available, presumably because such commodities are not being imported and sold in sufficiently large quantities. Moreover, when, during the main Canadian production months, such products are available, their prices in most instances are higher than those of the corresponding domestic products.

This kind of evidence makes it difficult, in the Board's view, to sustain a general case for significantly higher tariffs. It also seems to suggest that, in respect of many commodities, the main competitive problems encountered by Canadian horticultural producers occur outside the principal domestic production season, notably during the shoulder months. As living standards continue to rise, Canadian consumers can be expected to turn more and more to the purchase of relatively expensive produce, both processed and imported fresh, in off-season months. In this kind of situation, the main prospects for expansion in the broad sector of the horticultural industry seem to lie in increased marketing dependence upon a growing and prosperous domestic processing sector.

## FORM OF PROTECTION

### Existing Provisions

The most fundamental physical fact about the majority of fruits and vegetables in their natural state is that they are highly perishable and must be consumed quickly, within weeks, or even days, of harvesting. The development of canning, freezing and other preserving techniques effected radical changes in the marketing of such products by greatly extending their shelf-life, not uncommonly to two years, or even longer. Quite simply, this has meant that import duties designed to protect fruit and vegetable processors need to be applied on a year-round basis, whereas duties having as their purpose the protection of primary horticultural producers are likely to have a marked seasonal orientation, unless such duties apply to fresh produce imported for processing.

The Canadian Most-Favoured-Nation and General Tariff<sup>(1)</sup> with respect to fruit and vegetable products exhibit these characteristics. Protection in the case of processed commodities takes the form of a

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(1) The British Preferential Tariff is discussed infra, pp. 126, 127.

permanent duty - either specific or ad valorem, varying with the product - whereas (recent temporary budgetary changes apart) imports of most fresh fruits and vegetables are subject to specific rates of duty during the Canadian production season with, usually, free entry during the off-season; in the case of approximately one-third of the pertinent tariff items an off-season ad valorem duty is applicable when the seasonal duty is not in effect, but eight of these items also make provision for a free period. Normally, the time at which a domestic product begins to come on to the market - and the seasonal tariff becomes applicable - is also the period during which prices in the United States are falling, and thus the specific duty - which is levied on a poundage, as opposed to a value, basis - may assume a significant proportion of dutiable value. Indeed, in the mid-1950s (specific duties on fresh fruits and vegetables having been generally introduced in 1948) the ad valorem equivalent of such duties frequently amounted to 20-30 per cent in the case of vegetables and 10-20 per cent in the case of fruits,<sup>(1)</sup> whereas the specified ad valorem rate normally applicable during the remainder of the dutiable period was 10 per cent. As a result of the impact of inflation, differences of this order of magnitude no longer apply and, in several instances, the protection provided by specific duties is currently less than that provided by the 10 per cent ad valorem rate.

The form of protection described above embodied a crude sliding-scale mechanism, whereby the (ad valorem) rate of duty was increased as prices fell. In addition to providing growers with a higher degree of protection against lower-priced imports, this arrangement served to give greater stability to prices, both in the shorter and longer terms, than would otherwise have been obtainable under straight ad valorem rates. Thus, given specific duties set at appropriate levels, and discounting for the time being the possibility of long-term general inflation, the prevailing form of protection would seem to possess obvious merit from the standpoint of producers, although consumers are denied part of the benefit of falling prices.

#### Alternative Forms of Protection

Recognizing the vulnerability of specific duties to significant movements in commodity prices, the Board has given serious consideration to alternative and supplementary forms of protection. Obviously, the adoption of straight ad valorem duties has been among the possibilities examined by the Board. Although such duties are not so easy to administer as specific duties, their simplicity confer upon them an overriding advantage in most normal circumstances. Under the Most-Favoured-Nation and General Tariff, simple ad valorem duties already apply to a number of fresh fruits and vegetables as well as to a few processed fruit products and most processed vegetable products.

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(1) Report by the Tariff Board Relative to the Investigation Ordered by the Minister of Finance respecting Fruits and Vegetables, Reference 124 (Ottawa, 1957), passim.

An important consideration pertaining to the application of an exclusively ad valorem system of tariffs in relation to horticultural commodities destined for the fresh market is that the value added by packaging operations, often a substantial proportion of the value of the raw product itself, becomes subject to duty. Thus, some protection is afforded to domestic interests in connection with the packaging, in addition to the growing and further processing, of horticultural produce. This is in contrast to the situation which obtains when specific duties are applied. Since such duties are levied on a poundage basis (the weight of packages being included in the weight for duty), no allowance is made for the value added to a product by packaging. This consideration is discussed in more detail later<sup>(1)</sup> with respect to the issue of additional duties on small consumer, or retail, packs (usually cello) of 5 pounds or less in weight.

Ad valorem duties are, of course, proportional to commodity values and thus are responsive to changes in the price level in a positive way. From the domestic producers' point of view, they give greater protection than specific duties in a period of rising prices but the reverse is true when prices drop. Although the prices of fruits and vegetables, along with those of most other products, have risen substantially in recent years, the future movement of prices is, of course, uncertain. A compound, or "mixed," duty, applicable throughout the dutiable period and comprising a specific (fixed element and an ad valorem (variable) element is a system which would provide a measure of protection against changes in prices in either direction.

The Board has, however, concluded that the most appropriate form of tariff protection against imports of individual fresh fruits and vegetables would be a specific duty with an ad valorem minimum rate equivalent. This combination would appear to give domestic growers adequate protection against both declining prices (unless abnormally depressed) and inflation. The Board is also of the opinion that where appropriate - i.e., in the case of products which are specifically named and also eligible for duty - such a system should be applied consistently to all fresh fruits and vegetables coming within the scope of this Reference. It does not seem either logical or desirable to apply a specific duty to one type of fresh vegetable or fruit and an ad valorem duty to another type. In some circumstances, as indicated elsewhere in the present study, this might lead to the emergence of widely different levels of protection, in spite of original intentions to the contrary and basically comparable competitive situations.

In establishing, with respect to individual fresh fruits and vegetables, the cents per pound specific duty and the ad valorem "floor" the Board looked critically at pertinent import price averages and trends. Measured in terms of its ad valorem equivalent, the specific duty recommended by the Board will be found in most cases to be somewhat - although not much - above the ad valorem minimum rate. Thus, given moderate to rapid inflation, this minimum rate could be generally reached within the next few years, making the specific duty redundant. In other words, it is quite possible that

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(1) See infra, pp. 131-134.

by, say, 1980, in the case of most fresh fruits and vegetables, the recommended combined system of duties could have been automatically converted to an ad valorem system. From a seasonal standpoint, the specific duty will probably continue to be the effective rate longer during the peak of the domestic production period, when import prices are normally brought well below the average for the entire domestic marketing season. On the other hand, it appears that, in relation to recently prevailing price levels, the recommended ad valorem minimum would already constitute the effective rate of duty governing the importation of a number of fresh fruits and vegetables at the beginning and end of their respective dutiable periods.

The Board is aware that the combined system of duties herein recommended would add somewhat to the administrative problems of customs officers at ports of entry into Canada. However, the Board feels that the retention of the specific duty in the tariff schedule for fresh fruits and vegetables is desirable in order to provide Canadian producers with at least some assurance of a reasonable level of protection in the event that import prices decline, either seasonally or annually. The expectations for the next twenty years would appear to favour rising prices and, although present economic indicators point to a reduction in general inflationary pressure over the next year or so, the prospects of a sustained fall in the prices of primary products over the longer term seem remote.

## SEASONAL CONSIDERATIONS

### Existing Provisions

The point has already been made that the Canadian tariff does not apply any special seasonal provisions to the importation of processed fruits and vegetables. Such commodities entering Canada are either subject to duty on a year-round basis or are admitted duty-free. The situation in relation to fresh fruits and vegetables is very much more complex. Some fresh fruits and vegetables are permitted duty-free entry throughout the year, while a few (of which the most notable example is potatoes) carry a permanent, unchanging duty.

In the case of the bulk of fresh horticultural products coming within the scope of this Reference, however, duty is imposed at two or three different levels (including duty-free) depending on the time of year. As noted earlier, in a number of instances a specific duty is applied during the main Canadian production season with a 10 per cent ad valorem duty being applied during the remainder of the dutiable period. In the case of some commodities, the ad valorem duty may be applicable for only a few weeks at the beginning or end of the production period; in other instances it may be applied during the entire balance of the year when the seasonal specific duty is not in force. In all instances the pertinent tariff item specifies precisely the period for which the specific duty may be invoked, but in no case is the specific duty applied automatically.



### Period of Application of Duty

As reported elsewhere in this volume,<sup>(1)</sup> The Canadian Horticultural Council argued generally in favour of higher levels of seasonal protection, extending over longer periods of time. To compensate consumers, the Council proposed that the total dutiable period should be reduced in some cases by the elimination of off-season protection, where applicable. An extension of seasonal protection was generally requested on the ground that under existing provisions the period of application does not extend across the full marketing season, or because recent innovations in storage technology have lengthened the period during which produce can be kept before marketing.

In reviewing this matter, it has appeared to the Board that the key issue to be addressed is that of the length of time during which domestically-grown fresh fruits and vegetables are marketed. In this regard, it would seem that particular attention should be paid to the storability of produce. For non-storable, highly perishable fruits and vegetables, the marketing season coincides with the harvesting period - i.e., it extends from the first crop in early summer to the last harvest in late fall. For storable fruits and vegetables the harvesting or production season is extended by the length of time that these commodities can be stored without substantial loss of quality and still therefore receive consumer acceptance. The marketing season for such products extends from the first crop in early summer to the end of the effective storage period.

It will be apparent that tariff protection at any time of the year involves a cost to consumers. It seems no less clear that import duties imposed during the marketing season for a particular commodity will benefit the domestic producers of that commodity. It is also conceivable that off-season duties could confer some advantage on domestic growers producing competing products with a longer marketing season, as well as domestic processors who compete indirectly with fresh off-season imports. These latter benefits seem less certain than the cost which would be inflicted on consumers as the result of such duties. Accordingly, the Board has recommended that in the case of fresh table produce,<sup>(2)</sup> tariff protection should be provided only during the marketing season; imports of fruits and vegetables for fresh table use during that period of the year when supplies of domestic produce are not available, or are available in very limited quantities, have been recommended for duty-free entry.

It might, of course, be argued that any period during which Canadian-grown horticultural products are sold, or can be marketed, should be provided with tariff protection. However, domestic supplies during the first few weeks and last few weeks of the marketing season very often account for only a small proportion (less than 10 per cent) of total domestic production. To extend the maximum coverage of a seasonal duty to encompass these marginal periods of domestic production could, if fully implemented, impose substantial additional costs on Canadian consumers. In the Board's view, such an extension could only be justified if the potential existed for substantially increasing Canadian production at these times and if there were reasonable assurance that such an increase would actually take place.

(1) See supra p. 104.

(2) This excludes fresh market produce imported for processing. The Board's recommendations with respect to such produce are given infra p. 135.

Accordingly, the Board has concluded that the seasonal duty should generally cover a period comprising the heart of the Canadian marketing season and two or three "shoulder" weeks or months but not the extreme beginning and end of the marketing season. The length of the period of application of the seasonal duty is considered for each vegetable and fruit individually because the marketing season differs from one product to another. The Board's recommendations imply a number of changes in connection with the duration of seasonal duty periods. In certain cases dutiable periods have been shortened; in other instances - for example, where improved storage techniques have extended the marketing season for domestic produce - they have been lengthened. In general, however, the Board has sought to maximize as much as possible the period of duty-free importation without undermining the position of domestic growers, whose markets in the early part of the season are especially vulnerable, because of the lateness of the Canadian harvest, to competition from southern producers.

Although the degree of protection thus required by Canadian growers is subject to considerable variation over the length of the domestic marketing season, it has not seemed proper to the Board to vary the rate of tariff correspondingly. Rather, the Board has endeavoured to strike a rate of duty which, while apparently inadequate in the early part of the season, should provide most growers with a reasonable average level of protection over the marketing period as a whole. In the case of storable commodities having marketing seasons falling into two calendar years, the Board has generally recommended the continuation of existing provisions for a split in the dutiable period, thereby facilitating the imposition of duty at the beginning and end of each crop year, though without any difference in the individual tariff rate.

At present, each pertinent tariff item specifies the maximum number of weeks during which the (specific) seasonal duty may be applied. The seasonal duty does not, however, become automatically operative because, while the tariff stipulates the permissible number of weeks, it does not specify the precise period of application. The latter is determined annually by the Minister of National Revenue upon consultation with the Canadian growers, primarily through The Canadian Horticultural Council. The actual period of application may be and frequently is less than the maximum number of weeks allowable. In the case of certain fruits and vegetables, seasonal duties have not been invoked at all during the last few years. In some of these instances, this was probably due to the fact that a greater degree of protection could be obtained by the application of off-season (10 per cent ad valorem) duties in the on-season. Thus, in effect, a system somewhat akin to the presently recommended combined system of duties has already been applied in the case of certain fresh fruits and vegetables.

#### Tariff Regions

Under existing tariff arrangements, regional autonomy is permitted in regard to the implementation of seasonal duty rates. Thus, in relation to each individual commodity subject to a duty of this kind, the dates and duration of implementation may vary, within the provisions of the schedule, from one tariff region to another. There are presently three such regions - namely, the Maritimes, the central region (Quebec and Ontario east of Thunder Bay), and the western region (the Prairies, including Ontario west of Thunder Bay, and British Columbia).



The provision for the imposition of regionally differentiated rates of duty on certain fresh fruits and vegetables is based on the fact that marketing seasons, and the need for protection, vary from one part of the country to another. The production period and the marketing season in the Maritimes, for example, are often not only shorter but also later than in other horticultural crop production areas, especially British Columbia. If seasonal duties were to be applied on a uniform basis throughout Canada, this could mean that consumers living in, say, the Maritimes would be penalized by having to pay seasonal duties on horticultural produce imported outside the local marketing season as long as domestically grown produce could be obtained anywhere else in the country. Alternatively, it could mean that, in order to give maximum consideration to consumers in the Maritimes, necessary protection would be withheld from growers in central and western Canada. Separate tariff zones obviously prevent these anomalies although they also make it more likely that any deficiencies in regional supplies of fruits and vegetables will be met by imports from the United States rather than by interregional movements of produce within Canada. Despite this latter problem, the Board considers that the national situation requires the continued existence of tariff regions.

There remains the question of whether the present number of such regions (i.e., three) is the most appropriate. In this connection, the Board has considered the proposal made by The Canadian Horticultural Council for the incorporation of the existing Maritime zone with that of central Canada, thereby reducing the number of tariff regions to two - respectively east and west of Thunder Bay. It is noted that this proposal has the support of growers in the central region, who claim that the Quebec market has been adversely affected by imported produce coming in via the Maritime tariff region during periods when seasonal duties have been in operation in the former zone but suspended in the latter. The Board has seen no positive evidence in support of this contention and, indeed, given the costs of internal transportation and the risks and charges associated with the handling of perishable produce, it seems unlikely that the practice complained of would assume significant proportions in other than highly exceptional circumstances. In putting forward this view, the Board is essentially upholding the position taken by producers and consumers in the Maritimes, who have contested the Council's proposal for the amalgamation of tariff zones on the ground that the Maritimes region would thereby be made more dependent upon supplies of produce from the central provinces which, on account of transportation and storage factors, would often be higher in price and inferior in quality to supplies of fresh produce otherwise obtainable on a duty-free basis from the United States.

Rather than recommend a reduction in the number of tariff zones, the Board has, indeed, felt that a good case can be made for the creation of an additional zone - in the west. In terms of horticultural markets and production possibilities, British Columbia and the Prairie Provinces already constitute two largely distinct and independent regions. It has seemed to the Board that official recognition of this distinction by the creation of separate tariff zones would confer some benefit on consumers in the Prairie region at little or no prejudice to producers in British Columbia. The Board, however, is making no specific recommendation on this issue.

LEVEL OF DUTY ON INDIVIDUAL COMMODITIES: CRITERIAIndigenous and Non-Indigenous Products

In determining appropriate levels of tariff rates in relation to individual commodities, the Board has perforce reviewed a miscellany of pertinent criteria. Essentially, these fall into one or other of two broad groups of considerations the first of a qualitative or descriptive nature, pertaining to the characteristics, of individual products, and the second, measures of a statistical nature relating to the competitive situation and performance of domestic producers.

Since 1879, when the Canadian tariff first assumed a strongly protectionist aspect (as opposed to a revenue-raising function) Canadian tariff schedules have firmly endorsed the principle that commodities which are neither produced nor likely to be produced in the country should be admitted duty-free or at relatively low rates of duty. In this connection, section 6 of the Customs Tariff and the related Order-in-Council (P.C. 1618, 2nd July, 1936) provides that an article shall not be deemed to be of a class or kind produced in Canada unless 10 per cent of the normal Canadian consumption of that article is so produced.

In these terms, it is estimated that in 1975 only about 23 per cent of total imports of fresh fruits on a value for duty basis were of indigenous categories. Vegetables are generally more tolerant than fruits of a wide range of climatic conditions and only a few types cannot be grown in Canada. Thus, in 1975, some 93 per cent of the value of imports of fresh vegetables could be categorized as indigenous. Taking into account the fact that the normal duty on bananas was temporarily suspended in February 1973, about 95 per cent of the non-indigenous fresh fruits imported into Canada in that year and since, in terms of value, were free of duty. Similarly, all non-indigenous vegetables were imported into Canada free of duty.

While recognizing that the availability on the domestic market of fresh horticultural products of a type not grown in Canada (e.g., bananas) is likely to result in some substitution of those products for indigenous products (e.g., apples), the Board nevertheless feels that in the interest of consumers, non-indigenous fruits and vegetables should continue to enter Canada on a duty-free basis or at very low rates of duty.

In their natural state many of these non-indigenous products, of course, do not fall specifically within the scope of this Reference. In so far as they do, the main areas of concern are the n.o.p. basket items 8731-1 (vegetables), 9212-1 (edible berries), 9505-1 (melons), and 9600-1 (fresh fruits in their natural state). The first two items embrace a number of minor vegetables and berries respectively, which can be - and, indeed, are - produced in Canada, as well as others of a kind that cannot be grown domestically on a commercial basis. The Board is proposing that the commodities included in each

of these tariff items should be broken down into two groups - viz: products of a class or kind produced in Canada (which will lose their privileged duty-free status); and non-indigenous commodities. On the other hand, the Board is not aware of any commercial production in Canada of any product presently falling under tariff item 9505-1 or 9600-1, and has no proposal to make with respect to the tariff treatment of goods entering under these items.

Free entry for products of a kind not produced in Canada might logically seem to imply a tariff structure in which the heaviest duties are imposed upon commodities supplied wholly, or very largely, from domestic sources. However, since it appears that certain fruit and vegetable products in this category do not require any protection - indeed, a position of self-sufficiency, in itself, does tend to suggest an internationally strong competitive position - this is not a line of approach which the Board has chosen to pursue. On the other hand, there are some commodities - the most notable being potatoes - which play a fundamental role in their local economies and in relation to which a price margin of, say, 1 cent per pound at the farm-gate can spell the difference between poverty and comparative prosperity for a whole district or even region. In considering the most appropriate level of duty with respect to such basic products, it has not always seemed possible to the Board to ignore this regional dimension.

#### Geographical Sources of Imports - Preferential Tariffs

Viewed from the opposite standpoint is the question of providing favourable tariff treatment to imports from the less prosperous developing countries of the world. The General Preferential Tariff is, of course, designed to treat this issue. At present, a few non-indigenous fruits and juices are admitted under this tariff, mainly on a duty-free basis. The Board is in favour of the continuation and extension of such treatment, where appropriate.

Traditionally, of course, a margin of tariff preference, in general terms, has been accorded to products from British Commonwealth countries. So far as commodities coming within the scope of the present Reference are concerned, this preference is demonstrated by the duty-free admission into Canada under the British Preferential Tariff of all fresh fruits and vegetables, with the exception of potatoes, mushrooms and eggplant.

The Canadian Horticultural Council has called for a review of British Preferential Tariff rates on all fresh fruits and vegetables and their processed products<sup>(1)</sup> with a view to the discontinuation of this form of preference. However, after studying this matter the Board has concluded that preferential tariff treatment for

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(1) Tariff considerations relating to processed fruit and vegetable imports are considered in Volume 2 of this Reference.

the products of Commonwealth countries has not had any significant effect upon the geographical pattern of Canadian imports of fresh fruits or vegetables. As Tables 3a and 3b indicate, the United States and Mexico, Canada's closest neighbours, accounted for 99 per cent of total imports of fresh vegetables and 72 per cent of imports of fresh fruits in 1975. Other M.F.N. countries supplied a further 25 per cent of fresh fruit imports, while B.P. countries accounted for less than 3 per cent of imports of even those fresh fruits and vegetables which are non-indigenous to Canada. Fresh oranges and apples figured most prominently among the imports of fresh produce from British Commonwealth countries, representing 8 per cent of the total combined imports of these products into Canada in 1975. However, since oranges from GATT signatories and apples from all countries are admitted on a duty-free basis, no tariff preference was involved.

Thus, in the case of fresh horticultural produce, it appears that, quite apart from any comparative disadvantages in the sphere of production, factors associated with distribution over long distances - notably, relatively high transport costs and product deterioration through perishability - have more than offset any advantages conferred upon British Commonwealth countries by preferential tariff arrangements.

Accordingly, the Board does not propose to recommend the withdrawal or significant undermining of the privileged status presently enjoyed by Commonwealth countries with respect to the supply of fresh fruits and vegetables. In this connection, note is made of the change in trading relationships engendered by the United Kingdom's entry into the European Economic Community. The Board, however, takes the view that this is much too large a general question to treat as a side issue in the context of the present Reference. In any event, exports of fresh fruits and vegetables from the United Kingdom to Canada are of small practical significance.

### Form and Intended End-Use of Products

#### General Characteristics of Imports

Four basic merchandising situations may be identified. In the first place, fresh produce coming into Canada may be intended for immediate sale to consumers through the retail distribution network. In this connection, tremendous changes have, of course, taken place in the retail merchandising of some fruits and many vegetables since the end of World War II. Even twenty years ago, it could be estimated that as much as 80 per cent of the total volume of

Table 3a: Value of Imports of Fresh and Processed Fruits and Vegetables from Principal Supplying Countries and Tariff Groups, 1961, 1966, 1971 and 1975(a)

	Australia	South Africa	New Zealand	United Kingdom	Other B.P.	Total B.P.	United States	Mexico	Other M.F.N.	Total M.F.N.	Total
						- \$'000	-				
Fresh Fruits	1961	-	1,652	214	31	1,928	64,738	2,164	29,141	96,043	97,971
	1966	40	3,810	374	72	4,312	79,588	1,827	35,830	117,245	121,557
	1971	727	3,729	627	2	176	115,114	2,701	42,971	160,785	166,046
	1975	996	3,273	2,711	4	331	193,594	4,354	68,907	266,853	274,169
Fresh Vegetables	1961	-	-	28	11	133	173	2,661	899	47,830	48,003
	1966	-	39	20	-	192	251	66,866	7,202	581	74,900
	1971	-	-	27	2	226	85,849	13,644	1,045	100,534	100,789
	1975	-	-	14	2	1,043	1,059	11,137	1,161	193,024	194,080
Processed Fruits	1961	7,254	1,588	-	1,327	1,604	11,774	50,755	1,561	8,337	60,652
	1966	14,166	1,629	-	1,302	3,759	20,856	43,626	2,707	11,372	57,704
	1971	9,457	3,632	4	1,538	4,101	18,732	52,729	3,671	22,493	78,892
	1975	18,064	5,553	313	2,989	3,543	30,462	100,047	5,184	37,405	142,635
Processed Vegetables	1961	1	-	12	207	182	403	13,370	29	4,333	17,731
	1966	4	87	21	526	66	704	13,629	113	10,612	24,353
	1971	5	274	22	2,264	242	2,807	14,459	172	18,028	32,659
	1975	11	*	15	2,714	965	3,705	42,774	924	43,537	87,247
Miscellaneous (c)	1961	*	-	*	398	18	416	6,175	2	867	7,045
	1966	3	-	*	312	18	333	10,152	8	1,284	11,444
	1971	14	2	4	909	72	1,001	16,122	6	3,409	19,537
	1975	24	4	14	1,211	465	1,718	34,521	334	8,245	43,100
Total	1961	7,255	3,241	254	1,975	1,968	14,694	179,307	6,417	43,577	229,301
	1966	14,212	5,564	415	2,157	4,108	26,456	213,861	11,857	59,678	285,396
	1971	10,203	7,637	684	4,615	4,817	28,056	284,273	20,194	87,946	392,407
	1975	19,095	8,830	3,067	6,920	6,347	44,259	551,658	21,933	159,255	732,859
											243,994
											311,852
											420,463
											778,786

(a) There were no imports under the General Tariff during these four years.

(b) Includes \$1,670,000 under the General Preferential Tariff.

(c) Miscellaneous processed products containing fruits or vegetables.

Source: Statistics Canada.



Table 3b: Percentage Distribution of Imports of Fresh and Processed Fruits and Vegetables from Principal Supplying Countries and Tariff Groups, 1961, 1966, 1971 and 1975

		South Africa		New Zealand	United Kingdom	Other B.P.		Total B.P.	United States	Mexico	Other M.F.N.		Total M.F.N.	Total
		Australia				- per cent -								
Fresh Fruits	1961	-	1.7	0.2	*	*		2.0	66.1	2.2	29.7	98.0	100.0	
	1966	*	3.1	0.3	*	0.1		3.5	65.5	1.5	29.5	96.5	100.0	
	1971	0.4	2.2	0.4	*	0.1		3.2	69.3	1.6	25.9	96.8	100.0	
	1975	0.4	1.2	1.0	*	0.1		2.7	70.6	1.6	25.1	97.3	100.0	
Fresh Vegetables	1961	-	-	0.1	*	0.3		0.4	92.2	5.5	1.9	99.6	100.0	
	1966	-	0.1	*	-	0.3		0.3	89.3	9.6	0.8	99.7	100.0	
	1971	-	-	*	*	0.2		0.3	85.2	13.5	1.0	99.7	100.0	
	1975	-	-	*	*	0.5		0.5	93.1	5.7	0.6	99.5	100.0	
Processed Fruits	1961	10.0	2.2	-	1.8	2.2		16.3	70.1	2.2	11.5	83.7	100.0	
	1966	18.0	2.1	-	1.7	4.8		26.5	55.5	3.4	14.5	73.5	100.0	
	1971	9.7	3.7	*	1.6	4.2		19.2	54.0	3.8	23.0	80.8	100.0	
	1975	10.3	3.2	0.2	1.7	2.0		17.4	57.2	3.0	21.4	81.6	100.0	
Processed Vegetables	1961	*	-	*	1.1	1.0		2.2	73.7	0.2	23.9	97.8	100.0	
	1966	*	0.3	0.1	2.1	0.3		2.8	54.4	0.5	42.4	97.2	100.0	
	1971	*	0.8	0.1	6.4	0.7		7.9	40.8	0.5	50.8	92.1	100.0	
	1975	*	*	*	3.0	1.1		4.1	47.0	1.0	47.9	95.9	100.0	
Miscellaneous <sup>(b)</sup>	1961	*	-	*	5.3	0.2		5.6	82.8	*	11.6	94.4	100.0	
	1966	*	-	*	2.6	0.2		2.8	86.2	0.1	10.9	97.2	100.0	
	1971	0.1	*	*	4.4	0.4		4.9	78.5	*	16.6	95.1	100.0	
	1975	0.1	*	*	2.7	1.0		3.8	77.0	0.7	18.4	96.2	100.0	
Total	1961	3.0	1.3	0.1	0.8	0.8		6.0	73.5	2.6	17.9	94.0	100.0	
	1966	4.6	1.8	0.1	0.7	1.3		8.5	68.6	3.8	19.1	91.5	100.0	
	1971	2.4	1.8	0.2	1.1	1.1		6.7	67.6	4.8	20.9	93.3	100.0	
	1975	2.5	1.1	0.4	0.9	0.8		5.7	70.8	2.8	20.4	94.1	100.0	

(a) Includes 1 per cent under the General Preferential Tariff.

(b) Miscellaneous processed products containing fruits or vegetables.

Source: Statistics Canada.



some commodities sold for fresh table use was in pre-packaged form,<sup>(1)</sup> and the packaging business has undergone a major expansion since that time. Thus, much of the horticultural produce currently imported for fresh table use will be packed in small retail containers, e.g., 1-pound, 2-pound or 3-pound cello bags, 8-ounce or 12-ounce plastic baskets, net bags, or cello-wrapped pulp-boards. In addition to being wrapped and labelled, it is normal for such commodities to be trimmed, washed and rigidly graded prior to packaging. The trimming undertaken in respect of some crops can reduce the shipping weight, and hence the freight cost per pound of edible produce, by up to 50 per cent. Accordingly, it may be assumed that in normal circumstances, the price per pound of produce imported in retail packs will greatly exceed that of produce shipped in bulk. Also contributing to this differential will be the higher material costs of packaging in small quantities.

In spite of the aforementioned considerations, obviously not all fruits and vegetables imported for fresh table use are admitted in pre-packaged form. Shipments may also be made in trucks, tote bins, 50-pound or 100-pound sacks, bushel baskets or other types of bulk container, depending upon the product. Partly this is because some horticultural commodities do not require pre-packaging. This is especially so in the case of most fruits which, unlike vegetables, are generally free of soil when picked and have little or no inedible matter requiring removal before consumption.

In a third merchandising situation, produce may be imported in bulk with a view to pre-packaging in Canada prior to retail distribution. The extent and relative importance of this trade are difficult to determine, although it would appear generally more advantageous to pre-package in the United States on account of the lower costs of packaging materials in that country, its greater efficiency in packaging operations associated with economies of scale, and the probable lower wastage of produce through unintentional spoilage while in transit. Furthermore, since pre-packaging is essentially a weight-reducing activity, economies in transportation costs would clearly seem to identify the northern United States, rather than California or Florida, as the major sources of supply of horticultural produce imported in bulk for consumer packaging in Canada.

The fourth category of import, and the third involving bulk shipments, features the supply of fruits and vegetables to Canadian processors. Frequently, such produce will be of a different variety, grade or size from that supplied for fresh table use. This is not necessarily to say that such produce is inferior to that consumed in its natural state. However, because there is not in most cases the same need to cater to the aesthetic instincts of consumers, crops grown for processing purposes do not normally undergo the same careful, manual, more expensive methods of harvesting and preparation for the market as typify production for fresh table use. Thus, the farm costs incurred in supplying fruits and vegetables to the processing market are normally substantially lower than those applying to the provision of produce for fresh table consumption.

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(1) Report by the Tariff Board, Reference No. 124, p. 20.

These differences in costs at the farm level are likely to be even greater at the wholesale or import level. As already noted, the fresh table product increases in value as a result of trimming, washing, grading, and packing (undertaken to varying degrees), while the processing product, which is normally transported in bulk directly from the grower to the processor, is traded at what is essentially farm price. Consequently, when imported, the value for duty of a fresh table fruit or vegetable may be expected to exceed the value for duty of the corresponding processing product by an even wider margin than that applicable to costs at the farm-gate. This is especially likely to be the case when the fresh table commodity has been pre-packaged, resulting in a dutiable value per pound not uncommonly threefold that of the processing product.

The present tariff structure contains some recognition of these differing situations but does not deal with them in a consistent or comprehensive manner. Thus, as already indicated, the primary form of protection in the case of the majority of fresh horticultural products is a specific duty which, being applied on a weight basis, does not provide any additional protection in respect of the value added in pre-packaging, while it discriminates against the importer of relatively low value (processing) produce.

#### Pre-Packaged Products

With reference to pre-packaged goods, the existing tariff does, in fact, provide for the imposition of an additional ad valorem duty of 5 per cent M.F.N. or 10 per cent Gen. in respect of eight classes of vegetable - viz: green beans, Brussels sprouts, carrots, cauliflower, corn, beets, lettuce, and peas - when they are imported in packages of 5 pounds or less during the period that specific (on-season) duties are applicable. In no instance, it should be noted, is the additional packaging duty applied in conjunction with a basic ad valorem rate, either during or outside the Canadian marketing season, or in conjunction with a basic duty-free rate.

The Board's general approach in determining specific rates of duty in relation to individual commodities has been to establish appropriate levels of protection with respect to horticultural production only; no allowance has been made for the protection of packaging operations, even though some growers engage in packaging. Moreover, in establishing minimum ad valorem rates for individual commodities, the Board has been primarily concerned to set lower limits with respect to the protection afforded to growers.

In sum, the basic levels of tariff recommended by the Board - whether in the form of specific duties or minimum ad valorem rates - are not deemed to furnish any protection for domestic packaging. Accordingly, it is recommended that where such protection is warranted, it should continue to be provided on a separate basis, as at present.

The Canadian Horticultural Council has proposed that the existing list of vegetables subject to additional packaging duties should be retained and expanded to include potatoes, celery, onions, parsnips,<sup>(1)</sup> spinach and radishes. There are presently no packaging duties on fruits, and none has been requested. The Council has also proposed that the existing additional duty should be raised from zero to 10 p.c. under the British Preferential Tariff and from 5 p.c. to 10 p.c. under the Most-Favoured-Nation Tariff, and that, in the case of potatoes and onions, the maximum qualifying weight for packaging duty should be set at 10 pounds, instead of 5 pounds.

The aforementioned list of vegetables submitted by The Canadian Horticultural Council was compiled with major emphasis being placed upon commodities thought to be imported predominantly in consumer pre-packs. In reviewing this matter, the Board initially concluded that packaging duties should logically cover all vegetables which are consumer packed prior to importation. However, the Board has been reluctant to recommend the imposition of such duties merely for the sake of conceptual symmetry; and while it has, indeed, seen fit to recommend an expansion in the number of vegetables subject to packaging duties, it has been largely guided by the Council's recommendations.

With reference to the level of such duties, however, the Board finds the Council's suggestion for an increase in the B.P. rate from duty-free to 10 p.c. unacceptable in view of its general position in support of British preference.<sup>(2)</sup> Furthermore, in regard to the Most-Favoured-Nation Tariff, the Board is of the opinion that there is no justification for the proposed doubling of the duty on consumer packages.

Part of The Canadian Horticultural Council's case for increased packaging duties rests on the argument that packaging materials are more costly in Canada than in the United States. The Council points out that the tariff on imported packaging materials ranges between 15 p.c. and 20 p.c. in the case of cartons, shipping containers, paper sacks and bags, twine, wrapping paper, polyethylene sheets, and plastic bags. The Council also points out that these materials enter virtually duty-free when containing pre-packed produce. However, while the Board has assembled evidence which indicates that some packaging materials are, indeed, more expensive in Canada than in the United States, the available data suggest that the cost differentials are scarcely of significance in relation to total costs, amounting to less than 2 per cent of the dutiable value of imported pre-packed produce. Clearly, a 5 p.c. M.F.N. packaging duty on consumer pre-packs would not be justified solely by a 2 per cent total cost differential; and the doubling of this rate would not be warranted on the ground of material cost differences alone.

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(1) Parsnips were subject to packaging duties before 1968, when they ceased to be dutiable.

(2) See supra, p. 127.

Further, packaging duties should theoretically be calculated on the basis of the value added in pre-packing by materials and labour. However, the existing 5 p.c. duty applies - and the proposed 10 p.c. duty would apply - to the total dutiable value of imported produce. This means, in effect, that the net vegetable content becomes dutiable twice over, and that the real level of protection associated with packaging, as opposed to growing, is substantially more than 5 p.c. depending upon the ratio between farm costs and packaging costs. Thus, if it is assumed that consumer packaging prior to importation adds, say, 50 per cent to dutiable value (as might be the case with some of the smaller consumer pre-packs,<sup>(1)</sup> the imposition of the existing 5 p.c. M.F.N. packaging duty, applied to the total dutiable value, yields the equivalent of 10 per cent on the value added by pre-packaging. The proposed increase in the packaging duty to 10 p.c. M.F.N. would effectively double such protection to 20 per cent, or more. Indeed, in many cases the overall protective effect of the so-called "additional" packaging duty would exceed that provided by the basic Most-Favoured-Nation Tariff. Moreover, in assessing these calculations, the Board was conscious that weight and volume savings effected by pre-packaging tend to lower the extra protection afforded the domestic grower by freight.

The Board has, therefore, concluded that it seems reasonable to extend the coverage of additional packaging duties to encompass all vegetable items in respect of which retail pre-packs comprise a significant element in imports, but that such duties should not be raised above prevailing levels.

The Board was unable to accept the proposal of The Canadian Horticultural Council for the imposition of packaging duties upon retail packs of potatoes and onions weighing between 5 and 10 pounds. On the basis of cost data supplied to the Board, it emerges that the packaging process per se becomes proportionately less costly as the size of the packaged unit increases. In the case of small consumer packs (e.g., 1-pound cellos) the material and labour costs of pre-packaging can be expected to increase value by, perhaps, 40-80 per cent, depending partly upon the cost of the raw horticultural produce. On the other hand, with respect to 10-pound cello packs of potatoes and onions, the material and labour costs of pre-packaging would appear to constitute only 15-20 per cent of dutiable import value.

At present, additional packaging duties apply only when specific or seasonal duties are in effect. In the interests of consumers, the Board has decided against recommending any change in this arrangement.

The existing proviso governing the imposition of packaging duties is contained in Schedule "A" of the Customs Tariff and occurs under the general preamble: "Vegetables, fresh, in their natural state, the weight of the package to be included in the weight for duty." The proviso reads:



B.P.M.F.N.Gen.

When the beans (green), beets, Brussels sprouts, carrots, cauliflower, corn-on-the-cob, lettuce or peas specified in items 8703-1, 8704-1, 8705-1, 8707-1, 8708-1, 8710-1, 8715-1, and 8720-1, are subject to the specific rates of duty and are imported in packages weighing five pounds or less, each, they shall be subject to an additional duty of ..... Free      5 p.c.      10 p.c.

In view of the Board's recommendations respecting additions to the above listing, and in the light of certain other changes proposed by the Board, the wording of this proviso no longer seems entirely appropriate. In this connection, one particular matter to which reference should be made at this point concerns imports of spinach, parsnips, and carrots in consumer pre-packs. In the case of these three commodities, the Board has recommended that bulk imports under the Most-Favoured-Nation Tariff should be admitted on a duty-free basis. In consequence, the pertinent tariff items do not specify any periods with respect to the application of basic seasonal duties, and hence do not specify the periods during which packaging duties might apply. The Board's recommendations in this regard are contained in the proviso relating to additional packaging duties, reworded as follows:

B.P.M.F.N.Gen.

When the beans (snap), beets, Brussels sprouts, carrots (baby), cauliflower, celery, corn-on-the-cob, garlic, lettuce, onions (and shallots), potatoes or radishes specified in items 8703-1, 8705-1, 8709-1, 8713-1, 8714-1, 8715-1, 8716-1, 8721-1, 8724-1, 8729-1, 8735-1 and 8737-1 are not admissible free of duty and are imported in packages weighing five pounds or less, each, or when the carrots, parsnips, and spinach specified in items 8712-1, 8731-1, and 8739-1 are imported in packages weighing five pounds or less, each, they shall, in addition to any other duty to which they may be liable, be subject to a duty of ..... Free      5 p.c.      10 p.c.

Except that, in any 12 month period ending 31st March, this duty shall not be applicable to carrots for more than 40 weeks which may be divided into two separate periods, to parsnips for more than 36 weeks which may be divided into two separate periods, or to spinach for more than 12 weeks.



## Produce for Processing

At present, with the exception of cucumbers, the existing system of tariff classification does not recognize any distinction between fruits and vegetables imported in bulk for fresh table use and those imported for processing. Thus, irrespective of end-use, an individual product is entered under the same tariff item and is liable to the same rate of duty. The Canadian Food Processors Association is dissatisfied with this arrangement, which The Canadian Horticultural Council wishes to have continued. The Council's point of view is that to provide lower rates of duty on fresh products imported for processing would have the effect of removing the tariff protection from a substantial and increasing proportion of the production of the horticultural industry in Canada.

It appeared to the Board that if an undifferentiated approach were followed and the basic specific rates of duty now recommended in respect of fresh market imports were to be applied to imports of processing produce, these normally being of low dutiable value, Canadian processors would have to pay duties equivalent to 30 p.c., 40 p.c., 50 p.c., or even more. In order to avoid this kind of situation, the Board has generally recommended the establishment of separate tariff items with respect to fresh vegetables and fruits imported for processing, with rates of specific duty sometimes substantially lower than those of the corresponding fresh table items but with broadly similar ad valorem rates. However, in contrast to the Board's recommendations in relation to fresh table commodities, it is proposed that the duties on processing produce should be applied, not only on a seasonal basis (as suggested by the Canadian Food Processors Association), but throughout the year. In reviewing this matter the Board concluded that supplies of processing fruits and vegetables imported out of season could, in certain instances, result in the displacement of Canadian production in-season, and that duty-free entry out of season might not, therefore, be warranted. This approach assumes the continuation of the existing program whereby remissions of duty are granted in respect of certain shipments of fresh vegetables and fruits which are imported for processing when Canadian supplies are judged inadequate or unavailable.<sup>(1)</sup>

## Performance Variables

Within the general structural framework of tariffs imposed by the foregoing considerations, the levels of duty in relation to individual fruit and vegetable products have been further determined with reference to a range of statistical indicators pertaining to the comparative competitive position and economic performance of Canadian producers.

The Board has viewed the question of comparative costs as of central importance in its effort to devise a structure of rates which would give reasonable, but not excessive, protection to the majority of Canadian producers. As in the case of similar studies undertaken in the past, the problem of obtaining comparable data with respect to costs of production in Canada and competing countries has proved exceedingly difficult and the Board has generally been unable to arrive at any definitive conclusions in this regard.

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(1) For further information on this scheme, see infra, p. 138.

In the event, the Board, in seeking to establish the competitive position of Canadian producers, has been forced to look mainly to other criteria, including comparative prices (at the farm-gate and wholesale level) and measures of comparative productivity (e.g., yield per acre).

Among other statistical indicators which have claimed the Board's attention are measures of the relationships between aggregate domestic production, home consumption and external trade. In particular, the Board has been concerned to establish the trend in the domestic production of individual commodities and the extent to which the home market has been supplied by imports, especially - in the case of fresh produce - during the Canadian production season.

There is, in the Board's view, no special virtue in economic self-sufficiency as an end in itself. However, it has appeared to the Board that in those instances where traditional domestic markets of Canadian producers have been significantly undermined, both absolutely and relatively, by import penetration, a good prima facie case exists for an increase in the rate of duty. On the other hand, where Canadian producers have managed to maintain, and even increase, their share of the domestic market, in spite of any erosion in the level of protection, the Board has generally been in favour of leaving the existing rate of duty unchanged or of making an adjustment in a downward direction.

#### MATTERS OF DEFINITION AND CLASSIFICATION

##### Weight for Duty

Irrespective of the level of duty or of the form and intended end-use, horticultural produce must perforce be transported in some kind of package or container; and most of the 54 tariff items pertaining to fresh fruits and vegetables referred to the Board either include, or are subject to, the stipulation which requires "the weight of the package to be included in the weight for duty." In the case of processed commodities, a similar condition governs the importation of canned produce, "the weight of the container to be included in the weight for duty."

It will, of course, be appreciated that so far as the amount of duty payable is concerned, these provisos are only significant when the goods are, or may be subject to a specific levy based on weight. This is presently the case in respect of 31 of the fresh market items under review. However, in spite of being liable to specific duties, neither seed potatoes nor table potatoes ("potatoes n.o.p.") are subject to the aforementioned proviso, although (in view of the weight and bulk of the products in question) this omission would seem to be of little practical consequence in terms of the amount of duty payable.

In the case of fresh market produce, there is some uncertainty as to what constitutes a "package." The Board understands that for purposes of duty, "package" has been defined as the covering immediately surrounding the imported produce. Thus, if celery comes wrapped in plastic film and packed in cartons, the weight for duty would include the plastic film but not the cartons. On the other hand, if the celery were imported unwrapped in cartons, then the weight of the cartons would be included in the weight for duty. Although there would appear to be some inequity in this arrangement in that the additional weight might in some instances be that of a paper bag and in other instances that of a wooden crate, the Board has no proposal to make concerning the administration of the proviso in question.

With respect to fresh market produce, the Board's recommendations would result, at least initially, in the proviso being applied to more tariff items and more types of produce than at present. This would follow from the replacement of ad valorem duties, where applicable, by specific duties with ad valorem minima. Further, the Board has extended the application of the proviso to certain products not now liable to have the weight of the package included in the weight for duty.

In reviewing the tariff treatment of packaging and containers in general, mention should also be made of the relevant items in the Customs Tariff - viz: items 70905-1 and 70910-1 (dealing with reusable container) and items 71001-1 to 71006-1 (relating to coverings for imported goods). However, as these items are not restricted to coverings and containers for fruits and vegetables, they are not further considered in this report.

#### Brussels Tariff Nomenclature

Another matter to which reference should be made in the context of classification issues is the possible use of the Brussels Tariff Nomenclature with respect to fruit and vegetable products. Although no attempt has been made by the Board to convert the schedules for fruits and vegetables to the BTN, this would not appear to be an overly difficult task, should such a conversion be deemed desirable at some future date. There would inevitably be minor "gray" areas, particularly respecting the coverage of present "n.o.p." items, but these could probably be treated without much difficulty.

#### ADMINISTRATIVE ISSUES

##### Application of Seasonal Duties

While the Board has not made a detailed study of administrative issues pertaining to the importation of fruit and vegetable products, there are certain matters in this regard upon which it is necessary to comment. Thus, in connection with the supply of fresh horticultural produce, there is a need to ensure better provisions so that seasonal duties are not in force when domestic shortages

exist. Under present procedures, the period for the application of each specific duty is requested by The Canadian Horticultural Council following its review of production and market conditions for the forthcoming crop season. As indicated earlier, specific duty periods are determined on a regional basis (i.e., for the three tariff zones), and require approval by the federal Department of Agriculture before being put into effect by the Department of National Revenue.

The Board considers that to ensure wider representation of interested parties the length of the seasonal duty period, as requested by The Canadian Horticultural Council, should be subject to approval, on behalf of consumers, by the Department of Consumer and Corporate Affairs, as well as by Agriculture Canada. The Board also feels that a closer examination of requests respecting the application of seasonal duties would probably uncover more situations of likely market shortage, where the dutiable period could be shortened (i.e., applied for less than the maximum allowable term), thereby benefiting consumers at comparatively little disadvantage to growers. A closer watch on the length of duty periods would also seem necessary given the implementation of the surtax system proposed elsewhere in this report.

#### Remission of Duty Program

It appears that between 1968, when the scheme for remissions of duty was inaugurated, and 1974, applications of domestic processors for such remissions had to be submitted initially to, and approved by, The Canadian Horticultural Council, prior to receiving official approval.<sup>(1)</sup> The establishment by the Council in 1974 of a special Remission of Duty Committee made up of grower and processor representatives served to broaden representation. However, it did not immediately resolve problems in regard to the length of time required to process applications and to obtain authority for payment by Order-in-Council. Thus, as of 10 October, 1975, final approval for payment had still not been obtained in respect of applications for remissions of duty on certain fruits and vegetables imported for processing in 1973 and 1974.<sup>(2)</sup> From a variety of standpoints, therefore, the operation of this program has disappointed the reasonable expectations of many processors, although the time required to deal with applications has been substantially reduced in the past two years.<sup>(3)</sup> The Board welcomes this development, the more especially since, if its recommendations with respect to the imposition of year-round duties on imports of processing produce are implemented, the number of applications for remissions of duty may be expected to increase sharply.

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- (1) An account of the provisions and procedures of this program will be found in Appendix C, p. 211.
  - (2) Canadian Food Processors Association and The Canadian Horticultural Council Remission of Duty Program. Paper submitted on behalf of the Canadian Food Processors Association by Elmer T. Banting, Executive Vice-President (Ottawa, October 10, 1975), p. 13.
  - (3) Thus, applications for remissions of duty with respect to certain fruits and vegetables imported for processing during 1975 received approval by Order-in-Council dated 14 September, 1976 (Canada Gazette, Part II, Vol. 110 No. 19, p. 2775). For statistics pertaining to applications approved under this program since 1968, see Appendix C, p. 212.



### Federal and Provincial Regulations

At the federal level, regulations made under the authority of the Canada Agricultural Products Standards Act, 1955<sup>(1)</sup> are applied with reference to the grading, packaging and marking of the major indigenous fruits and vegetables<sup>(2)</sup> entering interprovincial or international trade. The grading regulations specify, in considerable detail, the required sizes and other physical characteristics of individual products and clearly sometimes act as non-tariff barriers to trade. Moreover, while horticultural produce may be imported in any package commonly used for a particular commodity in the country of origin, it appears that imported packages may be sold at the retail level in Canada only if they are of a size and type specified under the consumer packaging and labelling regulations of the Department of Consumer and Corporate Affairs. It further appears that orchard bins and similar large containers customarily used for transporting produce in bulk to processors are not considered to be "ordinary packages," and that, in consequence, U.S. growers supplying Canadian processors are normally unable to use the largest, most economical, types of container for shipment unless otherwise authorized by the Department of Agriculture. Furthermore, the regulations stipulate that packages containing produce imported into Canada must be marked with reference to a list of criteria, such as the name of the country of origin, quantity or volume of the consignment, etc.

The Board is cognizant of the fact that particular consignments of produce to Canadian processing plants may be exempted from the aforementioned regulations on the authorization of the Director of the Fruit and Vegetable Division of the Department of Agriculture. However, it is the Board's understanding that the Director will not waive the application of the grading, packaging or marking regulations unless he is satisfied that due consideration has been given to Canadian supplies of fresh fruits and vegetables for processing. The Board also understands that in those cases where specifications have been waived, produce consigned to a processor cannot be sold on the fresh market.

In sum, the aforementioned requirements, while clearly imposing restrictions upon domestic processors, also act as a type of non-tariff barrier, since foreign processors exporting to Canada must also follow the directives. This can prove a very costly business: for example, a minor product change may involve thousands of dollars merely to reprint labels.

These various federal restrictions are paralleled at the provincial level by provincial grade standards and regulations applicable within individual provinces. In the case of certain fruits and vegetables, the standards imposed by some provincial marketing authorities are higher (e.g., in relation to size) than the federal minimum standards. In such instances, imports are allowed to enter so long as they conform to minimum Canadian requirements.

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(1) See Fresh Fruit and Vegetable Regulations and Produce Licensing Regulations.

(2) The grading requirements apply to apples, apricots, asparagus, beets, blueberries, Brussels sprouts, cabbages, cantaloupes, carrots, cauliflower, celery, cherries, sweet corn, crabapples, cranberries, field cucumbers, greenhouse cucumbers, grapes, head lettuce, onions, parsnips, peaches, pears, plums, prunes, potatoes, field rhubarb, rutabagas, field tomatoes and greenhouse tomatoes.





## CHAPTER V: SAFEGUARDS RESPECTING LOW- OR DISTRESS-PRICED IMPORTS

In the Board's letter of reference from the Minister of Finance, the Minister drew attention to the fact that "in some years, there have been periodic imports or the threat of imports of certain fruits and vegetables at very low or distress prices ..." He asked the Board "to consider how ... provision could be made for action to be initiated quickly to ... counter the adverse affects of low-priced imports, or the threat of low-priced imports, on Canadian growers and processors."

The Board construes "low-priced imports," in this context, as resulting from an abnormal market condition in which, due to an over-supply of a particular fresh fruit or vegetable in an exporting country, imports occur at unusually low price levels and are associated with depressing effects on domestic prices. The primary concern is with import price levels which are significantly lower than the usually prevailing import prices in previous years. These lower import prices often are the result of selling a commodity at distress-priced levels which in the longer run would not be sufficient to sustain continuing production in the exporting country.

The purpose of the following discussion is to explore possible safeguard measures which could temporarily be applied, in addition to existing duties and with the requisite speed, to mitigate or to counter the effect of low-priced imports arising from short-term and abnormal production and marketing conditions. "Low-priced imports" (sometimes referred to as "low-cost imports") of fresh fruits and vegetables may also occur, not as a result of temporary over-supply, but from underlying and continuing advantages conferred on foreign producers by reason of such factors as better climate or lower labour costs. Factors which determine the underlying competitive structure of horticultural production in Canada relative to other countries have been considered by the Board and are taken into account in its conclusions and recommendations regarding the permanent tariff structure.

Canada also imports significant volumes of fruits and vegetables in processed or semi-processed forms. External conditions of over-supply affecting fresh horticultural commodities often lead to depressed prices for these commodities in the processed or semi-processed state. The ensuing study therefore considers low-priced or distress-priced imports as they may pertain to fresh, semi-processed and processed products.

### SUBMISSIONS TO THE TARIFF BOARD

In its brief to the Tariff Board The Canadian Horticultural Council, on behalf of domestic fruit and vegetable producers, made certain specific proposals for the establishment of an "automatic" surtax mechanism. A number of other interested parties also made submissions respecting the problem of low-priced imports. Possible provisions to deal with these imports were also discussed at length during the public sittings.<sup>(1)</sup>

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(1) Transcript, Volumes 7 and 8, pp. 827-978.

The Canadian Horticultural Council proposed that an automatic mechanism be "built in" to the existing tariff which would levy a surtax when the import price level of a commodity declined below a certain point. The Council suggested the following possible amendment to the existing Customs Tariff:

As soon as practicable after the commencement of each calendar year the Minister shall cause to be determined the average value, weighted as to quantity, at which fresh fruits and vegetables, of a class or kind produced in Canada, were imported into Canada in the preceding three calendar years. Whenever the invoice value of any imported fresh fruit or vegetable is less than 90% of such average value, i.e. the surtax value, there shall be collected, in addition to the duties otherwise established, a surtax equal to the difference. Until a new average value is determined, the previous average value shall be used.

The present Customs Tariff already authorizes the imposition of a surtax and such surtax has been applied over the years on imports of certain fresh and processed fruits and vegetables. The Horticultural Council supported the principle of the existing surtax legislation; the Council did, however, take issue with the administrative procedures, contending that the relief intended through a surtax is often ineffective because of late application.

The Canadian Food Processors Association, on behalf of domestic food processors, stated:

If surtaxes are imposed on fresh fruit and vegetables sold in Canada at distress prices, a similar surtax must be applied to processed products produced from these raw materials when they are imported (i.e. if a surtax is imposed on fresh or frozen strawberries a similar surtax should be applied to strawberry jam for the period of inventory.<sup>(1)</sup>)

This Association was of the opinion, however, that the formula proposed by the Horticultural Council (90 per cent of the previous three-year price average) would be excessively restrictive and would discourage lower prices achieved through technological improvements.<sup>(2)</sup>

The Canadian Fruit Wholesalers' Association and the Ontario Greenhouse Vegetable Producers' Marketing Board generally supported the surtax proposals by The Canadian Horticultural Council.<sup>(3)</sup> The Wholesalers' Association, however, noted a number of potential administrative problems should a mechanism as proposed by the Council be

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(1) Canadian Food Processors Association, Brief to the Tariff Review Board - Horticultural Products (Ref. No. 152).

(2) Transcript, Volume 8, p. 943.

(3) The proposals of these, and other, organizations are more fully presented in Chapter III.

implemented, such as the possibility of falsification of weights and the validity of the invoice prices recorded at the point of shipment. The Consumers' Association of Canada also supported the principle of a surtax as protection against low-priced imports while stressing the need for careful evaluation of the formula to be applied.

The Canadian Importers Association Inc. took the position that existing surtax legislation was adequate to deal with low-priced imports. This association advocated, rather than a surtax, the possible employment, in certain circumstances, of deficiency payments to Canadian growers under the provisions of the Agricultural Stabilization Act.

The National Farmers Union in its brief made no specific comment concerning measures to counter distress-priced imports. The Union proposed instead far reaching changes in agricultural tariff policy, under which the existing tariffs would be replaced by a system of variable import levies; the adoption of such a system would implicitly deal with low-priced imports.

#### PRESENT SURTAX PROVISIONS

In recent years the federal government has principally taken action against low-priced imports via the imposition of a temporary surtax pursuant to sections 8(2) to 8(4) of the existing Customs Tariff. Section 8(2) of this Act permits a surtax where produce of any country is imported into Canada under such conditions as to cause, or threaten, serious injury to Canadian producers of like or directly competitive products. Section 8(2) was introduced in 1968 as an amendment to the Customs Tariff in conjunction with the passage of the Anti-dumping Act. Imports are made subject to surtax by Order-in-Council. Under section 8(4) a surtax order expires after 180 days unless extended by an act of Parliament.

Prior to 1968, Canadian action to counter low-priced imports was authorized under section 40A.(7)(b), now superseded, of the Customs Act. This former section of the Customs Act made a specific provision for fresh fruits and vegetables with respect to the determination of value for duty in the case of certain price declines; existing governing legislation under the Customs Tariff does not so specify. Former section 40A.(7)(b) established the value for duty as being the average value at which like fresh produce was imported during the prior three-year period. A distinction should be made between the "value for duty" legislation existing prior to 1968 as against surtax action subsequently enabled by section 8(2) of the Customs Tariff. However, the net effect of these two systems would be the same.

Between 1957 and 1968, under previously existing value for duty provisions, action was taken in the case of the following horticultural products: fresh and frozen strawberries (1957); frozen peas (1958/59); and table potatoes (1961/62, 1962/63, 1966 and 1968). Requests were received, also, but no action was taken, for green onions (1960); fresh sour cherries (1964); fresh peaches (1965); and lettuce (1967).

Subsequent to 1968 a surtax was imposed on greenhouse tomatoes (1969); fresh, frozen and preserved strawberries (1971); and sweet cherries (1973). Surtax requests were also received with respect to table potatoes in 1969, 1971 and 1976 and with respect to canned tomatoes in 1976; however, in no instance was surtax action taken.

Surtax measures contemplated, or taken, by Canada under section 8(2) of the Customs Tariff are affected by Canada's obligations as a contracting party to the General Agreements on Tariffs and Trade (GATT). Changes in existing legislative and/or regulatory provisions designed to deal more effectively with this problem of low-priced imports need to be looked at in the light of Canada's commitments as a member of GATT. Article XIX of GATT permits "emergency action," such as a surtax, where particular products are imported under such conditions as to cause or threaten injury. This article binds any contracting party, in the event of proposed emergency action, to give notice in writing as far in advance as is practicable to other contracting parties whose exports may be affected. Article XIX also states that the exporting country has the right to retaliate if no agreement is reached respecting any emergency action.

The bulk of Canada's imports of fresh and processed fruits and vegetables originates in the United States. That country is thus the GATT member whose trade interests have been most affected by surtax actions taken by Canada. Under present consultative arrangements between the two countries, Canada has agreed to inform the United States regarding intended surtax measures in advance of their implementation. Mexico, which is also a supplier of fresh fruits and vegetables for Canadian markets, is not a member of GATT. However, Mexico is normally accorded notification, and an opportunity for consultation, when Canada contemplates emergency measures in respect of Mexican imports.

The main criteria used by the Canadian government to evaluate the extent to which low-priced imports may cause or threaten injury to Canadian producers are: (a) current and prospective producer prices in Canada and in the exporting country and their relation to prices in the previous five-year period, (b) current and prospective f.o.b. import prices and their relation to prices in past periods, (c) domestic and foreign data respecting production, acreage, and inventories, and (d) Canadian and foreign production cost data, if available.

The present procedure for handling surtax action involves: (a) an initial request to the Minister of Agriculture and/or Finance by The Canadian Horticultural Council or other grower or processor interests; (b) initial consideration by the Department of Agriculture followed by interdepartmental consultation involving normally representation from the Departments of Agriculture, Consumer and Corporate Affairs, External Affairs, Finance, Industry, Trade and Commerce and National Revenue; (c) notification of Canadian concern to U.S. authorities followed by possible consultation if United States commodity involved; and (d) submission to Cabinet requesting Order-in-Council authority for surtax; (e) issue of Order-in-Council specifying product(s), price level at which surtax is triggered and specific or



open dates of application; and (f) revocation of Order-in-Council on recommendation of Minister of Finance or expiration under section 8(4) of the Customs Tariff after 180 days.

Under working arrangements between Canada and the United States, that country has two working days to indicate whether or not it wishes consultation in accordance with Article XIX of GATT. Five to 10 working days may be required from the date of notification before the necessary consultation with United States authorities is completed.

The Canadian Horticultural Council's major complaint about existing surtax arrangements is the time required for implementation. It noted that requests for action have involved implementation periods ranging from 29 to 60 days. The Board agrees that the possibility of delay exists at various points in the procedure outlined above and that this delay could be crucial in the case, for example, of highly perishable fruits such as cherries with a comparatively short harvest period.

Producer groups frequently cannot forecast possible injury from low-priced imports with sufficient lead time to allow in-depth assessment of the usual criteria. Weather factors, particularly the amount of rainfall, in the last harvest month, are critical in determining the size of a fruit or vegetable crop. It is probably not feasible for potentially affected domestic growers to anticipate the need for surtax protection much more than four weeks prior to the need for actual surtax implementation. A well-documented case, however, is important to the interdepartmental consideration which precedes a recommendation for surtax action and to the consultation normally instituted with the exporting country. Considerable time also is required to reach agreement at various levels in the governmental decision making process on the points at issue. It is open to question whether in some cases, particularly where perishables are concerned, the present procedure or even a streamlined version can respond quickly enough to avert the apprehended injury to Canadian growers. A quick response to surtax action requests requires good basic documentation already in place and the institution of preventative rather than reactive decision-making procedures by government.

#### ALTERNATIVES TO PRESENT SYSTEM

The Canadian Horticultural Council recommended a version of the present import surtax procedures by which a surtax would be imposed automatically on fresh fruits and vegetables whenever import invoice values fall below 90 per cent of the previous three-year average. Before considering the Horticultural Council's proposal, the Board examined various alternatives.

### Quantitative Import Restrictions

The Export and Import Permits Act provides legislation enabling the Canadian government, under specific conditions, to make certain imported goods subject to quantitative restrictions. This Act establishes a list of goods (import control list) for which import permits are required. No fresh or processed fruit or vegetable is currently included in the import control list established under this Act.

Apart from considerations of international trade, administrative difficulties would occur if quotas were used to cushion the domestic market from external situations of over-supply. An integrated system of quotas would be necessary, perhaps covering a large number of varieties, grades and packs of vegetables and fruits. Criteria for determining quota levels would have to be established across the board and levels set annually, or more frequently.

A major objection to any quota system is that, until the determined quota point is reached, imports can still occur at distress prices and pressures to obtain a share of the market are increased. After the cut-off, consumers have no alternative, at whatever price, to domestic supplies. Any quota system for fresh fruits and vegetables entails an administratively cumbersome, and essentially arbitrary, allocation of quota shares among importers.

Moreover, domestic fruit and vegetable producers showed concern primarily over low prices rather than the volume of imports per se. While quotas are one means to stabilize prices, their applicability to the horticultural industry is doubtful, particularly for highly perishable commodities. For these reasons, the Board concluded that the use of quantitative restrictions was not a suitable alternative.

### Variable Import Levies

The European Economic Community (EEC) makes use of a system of variable levies on agricultural commodities. In brief, EEC variable import levies are tied to "reference prices" for commodities coming under this system. Reference prices are based on production costs within the Community, and in fact are the prices at which the Community supports the production of these commodities. To the extent that c.i.f. import prices are below the reference price, a duty is imposed equal to the difference. For fresh fruits and vegetables, this system would automatically impose higher duties where imports are entered at low or distress prices; thus protection against low import prices due to external over-supply conditions is implicit.

In the EEC framework, variable import levies are an integral part of a much broader farm support program, and their role in counter-acting the adverse effects of low-priced imports resulting from over-supply in exporting countries is related to the achievement of these broader objectives. The Board felt that to make proposals covering the desirability of a variable import levy system within the framework of a general national farm support program would not be within its terms of reference. It is pointed out, however, that, given the considerable degree of government intervention necessary in such a system

its practical application in Canada is doubtful. Moreover, the operation of such a tariff arrangement would entail the very considerable burden of collecting detailed production cost data with attendant definitional problems and judgments as to what constitutes a "reasonable" or "normal" net return to producers.

### Farm Price and Income Support Measures

The Board's letter of reference makes mention of provisions to counter the "adverse effects" of low-priced imports. The Board therefore examined not only quotas and surtax levies, but also such measures as price stabilization and farm income support programs.

At present, a price support program is available to fruit and vegetable producers under the federal Agricultural Stabilization Act; provincial legislation also provides for price or income support programs. The federal Act authorizes subsidies, or stabilization payments, to producers of specified commodities where prices decline below a certain "prescribed price" (90 per cent of the average price during the preceding five years).<sup>(1)</sup> Price support may also be provided by the Agricultural Stabilization Act via the purchase, and possession of, agricultural commodities for subsequent resale either off shore or domestically. Under the federal Act, stabilization assistance has been given to growers of various fruit and vegetable crops (e.g., potatoes, tomatoes, apples, peaches, sweet cherries and carrots).

Both federal and provincial programs usually operate in response to abnormal price declines. Lower domestic prices may be the result of purely domestic market conditions, in some cases may mainly reflect low import prices, and in other cases may result from depressed prices in both internal and external markets. In the past, price stabilization and income support measures have been introduced when domestic price levels were depressed compared to previous years, irrespective of other factors.

It is recognized that such measures can be employed to deal with the adverse effects of low-priced imports, but only in a remedial fashion, that is, after the market disruption or injury from low-priced imports has developed. The Board is of the opinion that the government should act by other means to minimize market disruption resulting from low- or distress-priced imports, retaining the instrument of price stabilization and income support measures as a longer term remedy, especially when depressed domestic prices are the result of internal conditions.

### Action Under the Anti-Dumping Act

The Anti-dumping Act is sometimes applicable to import situations involving low-priced imports. However, some important distinctions should be made between a surtax and dumping duty imposed pursuant to the Anti-dumping Act. Action may be undertaken against low-priced imports under the Anti-dumping Act in the event, and to

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(1) The prescribed price may exceed this formula in certain circumstances.

the extent, that import prices are below the normal value of like goods sold in the home market of the exporter, i.e., where there is dumping. However, even where there is no dumping, the import price levels may nonetheless be low relative to prices in Canada, and may cause, or threaten to cause, injury which calls for emergency action such as a surtax by the Canadian government. It is conceivable, moreover, that in the case of dumping, the import price inclusive of dumping duty, may still constitute low- or distress-priced imports injurious to Canadian growers or processors.

#### THE RECOMMENDED APPROACH - A TWO-TIERED SURTAX SYSTEM

After considering the various alternatives to deal with distress-priced imports, the Board could see no valid reason to recommend a change from the import surtax concept which has been in place since 1968. It concluded that some form of surtax action provided the simplest and best means of coping with this problem. In considering how to improve the existing surtax system and in judging the proposals of the Horticultural Council regarding an automatic surtax system, the Board had the advantage of having studied in considerable detail a wealth of statistical data, covering a period of 15 years, on all the vegetables and fruits which might qualify for surtax treatment under section 8 of the Customs Tariff. The Board was able to use the knowledge about individual commodities which it had gleaned from its broader tariff level study to make certain general judgments about the horticultural industry. Subsequently the Board applied these judgments to its study of the surtax system once it had decided upon that route as the most practical and rational way of attacking the problems created by distress-priced imports.

The Board noted in its broader tariff survey for example that the vast majority of vegetables and very many of the fruits grown in Canada are unlikely ever to be involved in a distress-priced situation requiring government intervention. Those fruits and vegetables and their growers are protected from such situations by a variety of factors including freight costs, geographical origin of competing imports and the nature of the crop. It was apparent also that for the bulk of fruits and vegetables which might at some time be the subject of surtax proposals, there existed no strong requirement for very rapid government reaction to the distress-priced import situation since these were commodities with a comparatively long marketing season where daily losses have proportionately less impact on the return to the grower. The Board was therefore able to conclude at the outset that its recommended approach should not and need not be as comprehensive as that suggested by the Horticultural Council whereby all vegetables and fruits grown in Canada would have been covered by an automatic mechanism for surtax imposition. It was satisfied that a streamlining of the existing surtax procedures which would include an onus on the government to react within a specified period would meet the requirements for the great majority of fruits and vegetables, either fresh or processed.

The Board attached particular importance to this conclusion since in the course of its individual commodity studies it had noted the very wide seasonal variation in the import prices of each commodity



and the very considerable variation in prices due to class or kind distinctions arising from grade, variety, type/form of pack or end-use. It was clear that a workable surtax system required meaningful data on average prices for the commodity at issue and that to be relevant at all in the determination of injury or the threat of injury, accurate price data would have to be collected in a narrow spectrum of those goods which can be established to be comparable as to class or kind. The Board decided early, therefore, not only that the list of commodities to be covered by any form of automatic surtax system could and should be very limited but also that within that group of commodities and for each commodity the price data collected to establish the moving averages would have to be as precise as possible.

The Board also gave considerable attention to the question of what constitutes injury for a domestic grower of vegetables or fruits. In principle, the most appropriate way of defining injury would be to establish the point at which the duty-paid landed value of competing imports falls below the domestic growers' cost of production. Injury as defined above will naturally not occur for all commodities after an identical decline in import price. Factors such as the relationship between the return to the grower and costs of production will vary from one commodity to another. Tree fruit growers are unable to control their production to the extent possible for certain vegetable growers and they may be more sensitive to sharply declining prices than producers whose large scale production and high yields allow for narrower margins. The Board considered whether the system could be constructed to allow for these individual variations in determining the surtax base but concluded that there was insufficient data on net returns to the grower to permit this type of fine-tuning. The Board is aware, too, that imports statistics are collected on an f.o.b. rather than on a c.i.f. basis and that this results in certain difficulties in comparing prices of the foreign and domestic product. The Board noted, however, that f.o.b. data would readily reflect changes in the dynamic component of import prices besides being available on a continuing basis. Moreover, the Board considered that it was in a position on the basis of its comprehensive study of the industry to make a reasonable judgment as to the percentage decline in f.o.b. import prices which would indicate on average, for the limited number of commodities involved, a situation where competing imports were selling below Canadian production costs.

With these general considerations in mind the Board concluded that it should recommend a two-tiered surtax system under which for a small selected group of horticultural products a surtax based on a fixed percentage of the three-year moving average of import prices would operate automatically in the absence of specific action to suspend the surtax by the Minister of Finance, and whereby for all other fresh, semi-processed or processed fruits and vegetables produced in Canada an improved, streamlined version of the existing surtax provisions would be in effect.



### The Proposed Surtax Mechanism

The surtax mechanism as envisaged by the Board would have the following provisions:

- (a) that a surtax be imposed whenever the value for duty of an import is below a previously posted surtax base, the amount of the surtax being equal to the difference between the value for duty and the posted surtax base,
- (b) that the surtax be imposed only when imports of the designated commodity are otherwise dutiable,
- (c) that the operation of the system may be suspended by Ministerial Order,
- (d) that the surtax base be calculated on the basis of a fixed percentage of the average unit values for duty declared during the preceding three years,
- (e) that, for each designated product, surtax bases be calculated by tariff region, by country of origin, by month, and where applicable, by variety, grade, form of product, pack, and use, and
- (f) that the surtax bases thus calculated be posted well in advance of the relevant production and marketing season.

Selection of a Base Period - A base period consisting of the three immediately preceding years is proposed. In section 40A.(7)(b), now superseded, of the Customs Act, a three-year average was employed specifically with respect to fresh fruits and vegetables. A longer period, e.g., a monthly average based on five years or more is also an alternative, but the upward trend in food prices poses problems. Should, for example, an annual rate of inflation of 8-10 per cent prevail for fresh commodities, import prices recorded in any period five years prior to a current import year would bear little valid relationship to current year price levels, or for determining any current year surtax base.

The Use of a Monthly Surtax Base - The surtax base could be established either with reference to annual, quarterly, or monthly averages. The Canadian Horticultural Council proposed that an annual base price be established at the beginning of each calendar year to apply for the following 12 months. After an analysis of monthly, quarterly, and annual price averages for 1966-75, however, the Board concluded that a single, or annual, surtax base would be unsatisfactory.

Import price data show that for most fresh fruits and vegetables there is a pronounced seasonal pattern within the calendar year. Import prices are notably lower when domestic shipments are at their peak; they are higher during the off-season and, as well, during the early part and towards the end of the domestic marketing season. A surtax base related to annual averages would thus be very much

influenced by the considerable volume of relatively high priced imports during the off-season. The result would be that, during the main marketing period, when prices are at a normal seasonal low, the surtax would be imposed when conditions would not actually warrant it; the minimum import price, or surtax base, during this domestic marketing period would be determined by the high import price levels normal to the off-season.

A surtax base using a quarterly average of import prices was also considered but it too would be insensitive to seasonal fluctuations since many fresh fruits and vegetables have a marketing period in Canada shorter than three months. The Board therefore advocates a system using a monthly surtax base. The base prices for each month within the season when a surtax could apply would be published well in advance of the start of the domestic marketing season for those fresh commodities which are designated.

The individual monthly surtax base would consist of a simple, or unweighted, three-year average. A simple averaging is proposed inasmuch as periods of high import volume tend to be associated with low prices; the use of a weighted average as between years might give undue weight to earlier prices prevailing under abnormal market conditions. The average price calculated for any one month in the base period would, however, be weighted.<sup>(1)</sup>

#### The Percentage Factor

It is proposed that the monthly surtax base be calculated as a percentage (termed here the "percentage factor") of the average of the f.o.b. import prices for that month in the preceding three years. This percentage would be less than 100, because import prices should be free to decline to some extent without the intervention of a surtax. The proposed surtax mechanism should not interfere with "normal" import price fluctuations but should come into play only where abnormal conditions cause or threaten to cause injury to domestic growers.

As mentioned earlier, the percentage decline in import prices which is likely to cause injury will be different as between commodities and indeed, for one commodity, as between different domestic producers. The Board decided that it would not be possible to fine-tune the system to the extent of having different percentage factors for different commodities, without having much more specific data regarding production costs and net return to the farmer. The Board is fully aware that the establishment of a percentage factor applicable without differentiation to the different commodities even within the small number to be covered by the new system may be unsatisfactory to some growers and advantageous for others. The Board believes, however, that in the long run, if set at the appropriate

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(1) Each of the three monthly averages would be derived by the aggregate f.o.b. value per month divided by monthly import volume. The simple average of these three weighted averages, adjusted by the appropriate percentage factor equals the monthly surtax base.

level, a common percentage factor will provide the sort of ongoing protection against abnormal conditions desired by the Canadian producer despite minor variations in the impact of the system on different growers at different times.

The Board thought it important not to set the base price too high in relation to the moving average. It believed that the 90 per cent factor recommended by the Horticultural Council would trigger a surtax too often to be really indicative of abnormal conditions. On the other hand, 80 per cent did not appear to be sufficient to the Board in what was likely to be a period of rising costs. In the Board's judgment, a percentage factor of 85 is a reasonable percentage to apply given the circumstances of the various commodities involved and the likely normal fluctuations in their prices over time as evidenced by the price data available to the Board. In this connection, the Board was able to form a judgment of how the described system might actually work by applying a percentage factor of 85 to f.o.b. import prices for the period 1966-75. In working through this historical price data, assuming the proposed mechanism were operative, the results provided assurance that the system envisaged would have worked satisfactorily, i.e., would have picked up unusual price conditions while permitting a desirable degree of apparently normal price fluctuations.

The percentage factor of 85 is necessarily arbitrary and will satisfy some growers more than others depending on the conditions pertaining at the time. It represents a surtax base somewhat lower than that which has generally characterized surtax levels imposed by the government in the past on horticultural products. The Board considers that it is at a level commensurate with Canada's obligations under GATT and that its advantage to the domestic producer of the named commodities proposed will lie in the certainty it would create regarding continuing protection against distress situations. Nevertheless the percentage factor and hence the surtax intervention point is modest enough to ensure that no incentive floor price is being created which will distort the normal flow of horticultural imports.

Operative Period - Under Group I, Schedule "A" of the Customs Tariff, most fresh fruits and vegetables are dutiable on a seasonal basis. The period during which the proposed mechanism would operate would be integrated with, and governed by, current procedures which specify the duration of the seasonal duty. The proposed surtax mechanism would not operate in any period, or in any region, unless the normal seasonal duty under Schedule "A" is in effect.

Ministerial Discretion - The need, on the one hand, is for a surtax mechanism which will operate quickly in response to certain defined circumstances. On the other hand, it should be possible to suspend the operation of this mechanism when the Minister of Finance is satisfied that no injury exists or is threatened. It is therefore proposed that the automatic provisions applying to any designated commodity could, in certain circumstances, be suspended or waived for any period by the Minister of Finance. In the Board's view such suspensions would probably be limited to circumstances where import price declines are paralleled by domestic price drops by reason of excess supply conditions both in Canada and in the exporting country, or where a regional crop failure dictates special action for one part of Canada.

It is envisaged that the surtax bases would be established and announced well in advance of the crop season or dutiable period. For non-storable fresh fruits and vegetables, January 1 would be an appropriate date. For storable fruits and vegetables and processed products, surtax bases would have to be posted on at least two different occasions, possibly six months apart, and also well in advance of the period of application. This advance notice would, of course, be useful to the industry. It would also provide the Minister with ample time to review domestic market conditions from the viewpoint of a possible suspension of the proposed provisions. Furthermore, the lapse of time between the posting of the surtax bases and the actual operation of the surtax mechanism would also provide an opportunity, probably more so than under the existing surtax procedures, for consultation with potentially affected trading partners pursuant to Canada's international obligations under GATT.

The operation of the mechanism would, in most periods, not result in a surtax. As long as import price levels are within the band allowed by the percentage factor and therefore above the monthly surtax base, importation would take place without attracting any surtax above normally applicable duties.<sup>(1)</sup>

Differentiation by Class or Kind - The envisaged system would not be workable unless applied on the basis of goods which are conformable as to class or kind. Considerable care would be required, in the computation of monthly surtax bases, to insure that all significant price variances are taken into account. For a given commodity, a number of surtax base classifications might be needed due to class or kind distinctions arising from differences in grade, variety, or type/form of pack. From the viewpoint of equity, it would be undesirable to use a surtax base derived, for example, from low-priced bulk imports, to apply to an import shipment of higher value consumer packs. In such a situation importers could, justifiably, contest the classification procedures used in levying the surtax. Moreover, the objective of the described system is not to compensate for certain differences in grading and packaging standards between Canada and its suppliers.

Generally speaking, the import price of any kind of fresh fruit or vegetable appears to differ mainly because of differences in (a) end-use, (b) package size and/or form, and (c) variety. Grade distinctions may also result in different price levels. Fresh produce may be entered either for processing purposes or for fresh market sale; imports for processing normally comprise unwashed and ungraded "field-run" product in bulk shipments and are entered at a per pound price likely to be much less than when the same commodity is imported for fresh market sale. Fresh market imports themselves occur in a

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(1) Some qualifications should be pointed out. The Board conducted a survey of import prices which indicates that invoice prices, by individual import shipment, can vary significantly around a central mean. Even in a period, for example, when the monthly import price mean is well above the monthly surtax base, some small proportion of imports would probably be below the surtax base, given the dispersion of invoice prices, and thus be subject to a surtax levy.



variety of sizes and pack forms; substantial price differences result, for the same commodity, between larger packs, 50- or 100-pound bags or sacks, and small retail packs, usually 1-, 2-, or 3-pound "cellos." Also, some vegetables such as carrots and beets may be entered for enhanced consumer appeal in "bunched" form, i.e., with leaves and stalks attached, at much higher prices than when the same commodity is entered "topped" in cello packs. With respect to fresh beets, for example, a 1974 study of invoice documents showed that per pound prices were 1.3-1.7 cents for imports for processing, 10-14 cents for topped fresh market beets in cello packs, and 25-30 cents if in bunched form. Substantially different price levels may prevail, moreover, as a result of varietal or type differences, particularly in the case of certain fruits such as apples (McIntosh vs. Red Delicious, Spartan, Granny Smith, etc.) or pears, (Bartlett vs. Anjou and Keiffer).

As discussed below, significant improvements to existing import price data and recording procedures would be necessary to make the proposed system workable and to minimize problems of classification.

#### Price Effects of the Proposed Surtax Provisions

A temporary surtax, as applied at present under section 8(2) of the Customs Tariff provides, in effect, a minimum floor price for imports and thus constitutes a price support device benefiting domestic producers. The recommended "automatic" surtax system would, during its operative period, similarly establish but on a continuing and constantly adjusting basis, a floor price for imports of designated commodities. As such the system envisaged for those commodities would protect Canadian growers not only against the disruptive effects of actual imports at abnormally low or distressed prices, but also against the threat of such imports. At the same time, because of the use of moving averages, allowance is made for the interaction of competitive forces. Moreover, the proposed system could obviate the need for more direct forms of government price intervention and would appear to be largely operable under already existing provisions in the Customs Tariff, i.e., section 8(2).

As discussed during the public sittings, it is highly improbable that any surtax levy would, in practice, actually be collected. In fact, it would seem likely that imports would be "priced up" to the level set by the declared monthly surtax base. (1) The monthly surtax base would be derived from observed or recorded f.o.b. invoice prices. These would include the surtax amount where pricing up takes place; observed invoice prices would be lower, on

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(1) As an example of this effect, assume a U.S. exporter is willing to sell, and a Canadian importer willing to buy, certain fresh produce at 20 cents per pound. If the monthly base price is 25 cents, this transaction would occur at 25 cents. The importer otherwise would pay 20 cents plus a surtax of 5 cents to the federal government. A transaction price of 25 cents would entail no extra cost to the importer, who would avoid any surtax levy, but would confer a benefit of 5 cents per pound to the exporter to the extent that the market is responsive to the higher price.



the other hand; where pricing up does not occur, that is, where the observed price would exclude the surtax element. Furthermore, when imports are entered at an f.o.b. price equal to, or just above, the monthly surtax base, it would not be possible to determine directly, without reference to external market indicators, whether or not the surtax mechanism were operative; the recorded invoice price might, or might not, include a surtax component. For a designated commodity the effect of the proposed provisions could be readily judged, however, from a comparison of import prices to selling prices prevailing in the country of export.

The proposed system would not intervene in any way, of course, where import price upswings occur, in which case the consumer buys at market-determined price levels. Where there is an abnormal price decline, on the other hand, the consumer would benefit only partly from low prices since the proposed surtax structure would be targeted to prohibit import price declines below the surtax base. The Board also considered the case of a secular price decline in imports resulting from, for example, major improvements in growing and harvesting technology. In this instance consumers would eventually benefit from resulting lower import prices; however, the flow of such benefits to consumers would be significantly delayed by the surtax mechanism as described, particularly if pricing up to the surtax base is assumed. The protective device against this sort of situation lies in the Minister's ability, after consultation and due consideration of all the relevant factors, to suspend the automatic surtax provisions.

#### Administrative Requirements

Some serious practical difficulties would confront the implementation of the automatic surtax structure recommended here. Import prices would have to be collected and maintained for each fruit and vegetable, and for each of the three tariff regions, with price breakdowns as to grade, variety, produce form, and type or size of packaging. According to a rough estimate, as many as 1,300 import price series could be necessary if all fresh fruit and vegetable commodities were included for coverage under the automatic provisions. (1) Moreover, this would result in 6,500 monthly surtax base calculations assuming an average dutiable period of five months. An attempt to incorporate, under the proposed provisions, all semi-processed and processed horticultural products, would, in view of the variety of such products, at least triple these figures.

The Board had in any case rejected the possibility of including a broad range of fresh, processed, and semi-processed horticultural products under the proposed surtax mechanism. For most products such inclusion is, in fact, unnecessary as the likelihood of their importation at low or distress prices is small and/or the time factor is not critical.

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(1) For some individual fresh commodities as many as 72 import price categories might be necessary, given, for example, the possible combinations arising from three tariff zones, and, in turn, three varieties, two grades, and four pack sizes.

To make the envisaged system viable, even where application is limited to a relatively few commodities, considerable additional work would be involved. Import price information as at present recorded by Statistics Canada does not provide the level of detail required; it would be necessary to establish a number of new import subclassifications; a main task being the subsequent coding of base period data, e.g., entry documents and import invoices, into appropriate categories. Moreover, in some cases the institution of better recording procedures at the port of entry level might be required. However, the Board felt that staffing requirements could be held to an acceptable minimum, particularly through the use of electronic data processing.

Assuming the adoption of the system, a substantial lead time would be entailed before actual implementation could commence. It would be necessary, first, to collect and appropriately classify import price data for the starting 3-year base period. Moreover, the entry documents required are at present held by Statistics Canada for only the most recent 12-month period; implementation could therefore be delayed for at least two years. This period could be shortened, however, if a 2-year base period were initially employed.

#### Commodities Covered

Fresh Fruits and Vegetables - The Board proposes that the described surtax system be applied, initially, only to those fresh fruits and vegetables which, in the period under review, have been subject to surtax action, or requests for such action, i.e., sweet cherries, sour cherries, strawberries, peaches, green onions, lettuce and potatoes.<sup>(1)</sup> Where necessary, other commodities could be designated for coverage subsequently, such later inclusions perhaps extending, for example, to asparagus, celery, plums and prune plums.

The Board concluded, generally, that the proposed surtax should cover those fresh fruits and vegetables which are perishable and which are normally harvested in a short period. The injury associated with distress-priced imports is most likely to occur, moreover, for those crops where the domestic harvesting period coincides with that in the United States. The principal rationale of the envisaged surtax mechanism is to ensure a prompt response to imports at distress prices. This is particularly necessary in the case of perishable crops with a short marketing season. With reference to sweet cherries, for example, virtually the entire domestic crop is marketed in the month of July. Moreover, import competition from distress-priced imports is most likely in this month, since U.S. growers market their crop in the same short harvesting period. Under existing surtax procedures, action pursuant to industry request might not be possible until the latter part of July, when it would be largely ineffective.

There is not the same degree of urgency for storable crops. When the marketing season extends over 9 or 10 months, a procedural/administrative delay of one month would expose only a relatively small proportion of the domestic crop to a period of distress-priced

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(1) While greenhouse tomatoes were subject to surtax action in 1973 this commodity is excluded. Such action related to certain temporary tariff changes made in that year and not to distress-priced imports.

imports. On the other hand, for crops such as cherries and strawberries, a serious delay might result in surtax action only after almost all of the crop has been sold under abnormal market conditions created by distress-priced import competition.

It is apparent that the marketing of table potatoes does not meet all of the selection criteria outlined. Potatoes are not perishable, and, in fact, domestically grown potatoes are marketed throughout the year. It is nonetheless recommended that the proposed system cover this crop, which, by a considerable margin, is the most important vegetable produced domestically. Table potatoes, moreover, have been the subject of numerous surtax actions or requests in recent years, on seven occasions since 1959. Domestic producers of this crop have also received substantial aid under the Agricultural Stabilization Act. It is concluded that the particular problems confronting the marketing of potatoes, the likelihood of persisting problems, and the importance of this crop would justify its inclusion in any "automatic" surtax mechanism if only to ensure that the government has full knowledge of price movements for this commodity.

The inclusion of table potatoes would probably necessitate changes to present section 8(4) of the Customs Tariff which limits the duration of any surtax to 180 days. For potatoes the operative period could be 52 weeks; therefore, under the described automatic provisions a surtax might be in effect for most of the crop year and in excess of the existing 180-day limitation. This situation might also occur in the case of certain semi-processed, storable products which, as discussed subsequently, are designated for coverage under the automatic mechanism.

Processed and Semi-Processed Products - The adoption of safeguard provisions for fresh commodities as described here would have a number of implications for the domestic food processing industry. Specifically, the imposition of an import surtax on the fresh, or raw, product, whether under new or existing surtax provisions, would not prevent the import into Canada of the processed or semi-processed product at distress prices, to the serious disadvantage of Canadian processors. U.S. processors, for example, would be able to obtain a given fruit or vegetable at a significantly lower cost than Canadian processors. U.S. processors would thus enjoy a cost advantage in competing in the Canadian market; imports in processed form would increase or profit margins realized by domestic processors would decline, probably both.

The adverse impact on Canadian processors would not greatly affect the viability of a large, multiplant, multiproduct firm. Of the broad range of commodities produced by such a company, only a few commodities would be affected by surtax action. Smaller independent processors who are more dependent on, or specialize in the processing of the particular fruit and vegetable liable to a surtax, could, however, be seriously affected. Furthermore, while distress-priced imports and the attendant surtax action are reflective of abnormal situations, and would not occur for a number of years in a row, one poor year can be decisive in the existence of a processing operation, particularly a smaller one.

It is also possible that the intended benefit to domestic growers of a surtax on a fresh commodity might be largely negated by increased imports of the same commodity in its processed or semi-processed form. Where U.S. processors, as above, enjoy cost advantages, and import competition forces domestic processors to suspend or greatly curtail production of certain lines, growers for the processing market would face declining demand and depressed farm selling prices. The Board concludes, therefore, that whenever a surtax is being imposed on a fresh fruit or vegetable, consideration should as a matter of course be given to a compensating surtax on its processed products.

There are some vegetables where the existence of abnormal surplus conditions in the country of export results in low-priced imports into Canada not in the fresh but, rather, in the processed form. This occurs when trade in the fresh form for processing is prohibited by distance and/or perishability, e.g., shelled peas for processing, shelled corn for processing and processing tomatoes. With respect to these vegetables, surtax action to counter low-priced imports would be considered on the processed products only.

The Board is of the opinion that, with the exception of the products noted below, surtax action with respect to processed products should not be provided under the recommended automatic surtax mechanism but under the existing provisions. As pointed out earlier, the Board was very reluctant to recommend a system which would require a large administrative organization. Furthermore with respect to processed products there is not the same need for a responsive surtax mechanism as for perishable fresh commodities, since they normally have a shelf-life of at least 12 months.

While no fully processed horticultural products require inclusion under automatic provisions, there are some exceptions to this general rule in the case of semi-processed horticultural products. Considerable quantities of cherries and strawberries enter into Canada in the semi-processed state for further processing.<sup>(1)</sup> For these fruits, semi-processed imports greatly exceed, in volume, imports of the fresh product for processing. It is highly probable that a surtax, if applicable only to imports in fresh form, would merely lead to a greater use of lower cost semi-processed imports as an alternative. In the case of strawberries, for example, domestic jam manufacturers can utilize either fresh, frozen, or sulphur dioxide strawberries. A surtax levied on the fresh commodity would not necessarily encourage the greater use of domestic strawberries if low cost raw product is available through imports of frozen strawberries or berries in sulphur dioxide. The Board therefore considers that the following semi-processed commodities should also be designated for coverage under the proposed automatic surtax: (a) sweet cherries, in liquid preservative; (b) sour cherries, frozen; (c) strawberries, in liquid preservative; and (d) strawberries, frozen.

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(1) Sweet cherries are entered in liquid preservative (sulphur dioxide) and sour cherries are entered in frozen form; strawberries may be entered either frozen or preserved in sulphur dioxide.



Imports of fresh cherries and strawberries are subject to duty during only the short period of their domestic availability and, hence, the automatic provisions respecting these fruits would be in operation only during a brief period. However, in their storable semi-processed form these fruits are available, and imported on a dutiable basis, throughout the year. Consequently, with respect to semi-processed cherries and strawberries, the proposed surtax provisions would need to be operative throughout the year. This would require an amendment to section 8(4) of the Customs Tariff to extend the maximum period from 180 to 360 days.

Whereas Canada's imports of fruits and vegetables, in fresh form, originate almost entirely in the United States, imports of the above-mentioned semi-processed products are frequently significant from such countries as Mexico, Poland, and Italy. Thus, for the semi-processed commodities designated, the exports of several countries might be affected by the automatic mechanism proposed. To provide equal treatment to trading partners, it would be necessary to apply any formula for surtax determination according to import origin, i.e., surtax bases would need to be differentiated by country of export.

#### Improvements to Existing Surtax Procedures

The Board is recommending that only a relatively few horticultural products be designated for coverage under the proposed surtax mechanism. It is recommended, for those fresh, processed or semi-processed products not designated, that surtax action be considered upon request, under the surtax regulations and procedures which now exist. However, a number of improvements are proposed to the current surtax procedures in order to provide a more streamlined and responsive vehicle for evaluating, and acting upon, grower or processor requests for surtax assistance.

At present, under section 8(2) of the Customs Tariff, the levy of a surtax requires Governor-in-Council approval, normally accorded only after full Cabinet consideration. The Board was of the opinion that the elimination of Order-in-Council requirements would serve to speed up the decision making process. It is recognized that Cabinet consideration permitting a full representation at the Ministerial level of the various interests involved, is at present deemed desirable for surtax action contemplated by Canada. Existing procedures, however, already provide for representation of consumer, grower, and processor interests at the interdepartmental level. The Board recommends that the Minister of Finance be given the authority to take action after consultation with his directly interested colleagues.

In the past, the total response time to requests for surtax action has not only often been too lengthy but has also varied considerably. The Board concluded that existing procedures could be greatly improved if a mandatory time limit were established for the review of all surtax requests. It is recommended that there be a maximum period of 20 working days or four weeks between the date of any initial request and surtax implementation, or between the date of initial request and a finding that action is not warranted.



At the public sittings it was pointed out that significant delays may occur where initial surtax applications are not adequately documented. Closer coordination between Agriculture Canada and grower/processor groups is recommended to ensure that initial submissions include all necessary information. Specific consideration should be given to a standardized request format to be circulated in advance to associations or processor/grower groups likely to be involved.

#### Extension of Time Limit for Surtax Applications

The shelf or storage life of many processed or semi-processed products often extends to one year or more; moreover, processors frequently pack, in a single production run, their market requirements for the following 12-month period. Storable fresh vegetables and fruit are also marketed beyond a six-month period. Where surtax measures are deemed warranted for these products, the Board felt that such protection would in some circumstances be needed for the full inventory period. However, as noted previously, any surtax order authorized under existing legislation is terminated after 180 days unless continuation is approved by both houses of Parliament. The Board concludes that this 180-day period is insufficient and should be extended to a maximum of 360 days.

#### Summary of Recommendations

The Board recommends:

I That for the purpose of initiating an immediate response to low-priced imports of certain sensitive fruits and vegetables, provisions and procedures be introduced for imposing an automatic surtax, such provisions and procedures to comprise, in essence, the following:

- (a) a surtax be imposed whenever the value for duty of an import is below a previously posted surtax base, the amount of the surtax being equal to the difference between the value for duty and the posted surtax base,
- (b) the surtax be imposed only when imports of the designated commodities are otherwise dutiable,
- (c) the operation of the provisions be subject to suspension by Ministerial Order,
- (d) initially these provisions apply only to fresh sweet and sour cherries, fresh strawberries, fresh peaches, fresh lettuce, fresh potatoes, frozen sour cherries, frozen strawberries, sweet cherries in liquid preservative, and strawberries in liquid preservative,
- (e) the surtax base for each commodity be calculated on the basis of a percentage factor of 85 applied to the average unit values for duty declared during the preceding three years, and separate bases for each commodity be calculated by tariff region, by country of origin, by month, and where applicable, by variety, grade, form of product, pack, and use, and

- (f) the surtax bases thus calculated be posted well in advance of the relevant production and marketing season.

II That surtax action with respect to fresh and processed fruits and vegetables not designated for the purpose of the automatic surtax continue to be taken, as requested, under the existing provisions and procedure relating to section 8(2) of the Customs Tariff but that these provisions and procedures be amended in the following manner:

- (a) approval of surtax action be at the discretion of the Minister of Finance,
- (b) the review of a request for surtax action not exceed twenty working days from the day of receipt of the request,
- (c) a standard request format be instituted on the basis of consultation between the Horticultural Council and the Department of Agriculture, and
- (d) the maximum length of time for imposing a surtax be 360 days.

III That for every fresh fruit or vegetable in regard to which a surtax is imposed, consideration be given as a matter of course to surtax action in respect of the semi-processed or processed forms of that commodity.



## CHAPTER VI: THE CONSUMER INTEREST

In its letter of reference, the Board was directed to take "into account the general interest of Canadians as consumers" in examining the present tariff structure pertaining to the fruit and vegetable growing and processing industries. The Board was also expected to consider, in its overall assessment of each of the commodities referred to it, those factors affecting consumption. Finally, the Board was asked to consider provision for quick action to benefit consumers at times when domestic products are in short supply.

During the public sittings held pursuant to Reference 152, the Board heard representations on behalf of Canadian consumers by the Consumers' Association of Canada. This association expressed, in its submission to the Board, a number of consumer concerns pertaining to the level of protection to be provided on fresh and processed fruits and vegetables. The association submitted, generally, that tariffs should provide only that minimum protection necessary to maintain efficient production and processing. It was advocated that "protection should consist of the lowest possible tariffs at times when Canadian produce is being marketed and no tariffs during seasons when no Canadian produce is being marketed."<sup>(1)</sup> The Consumers' Association also raised some concerns about the adequacy of the three existing tariff regions with respect to the application of import duties for most fresh fruits and vegetables.

The Board, in its tariff recommendations, has sought to achieve a structure which provides a justifiable degree of protection to the primary producer and the processor, on one hand, while minimizing as much as possible, on the other hand, the cost to the Canadian consumer. In considering each individual commodity the Board has tried to put into perspective the costs and benefits of requested tariff protection by calculating the potential maximum cost at the consumer level and relating this to the grower's potential benefits. These admittedly rough calculations have enabled the Board to gain an insight into the impact of proposed tariff changes.

A tariff on fresh and processed fruits and vegetables, as with a tariff on any product, constitutes a cost to the user or consumer, and confers a benefit on the primary producer and/or processor. Thus, putting aside the question of the producer's interest, it would seem that an elimination of all import duties on fresh and processed horticultural products might be in the interest of Canadian consumers, inasmuch as this would provide duty-free access to competitive imports. However, in the long run the consumer is unlikely to have continuing benefit from such free entry.

The abolition of tariff protection would probably result in a substantial contraction in the domestic growing and processing industries, and their virtual disappearance in certain high cost marginal areas. However, evidence suggests that prices of imported fresh produce decline most markedly during the Canadian production season in those areas where there is a vigorous, competitive domestic horticultural industry. In regions where domestic supplies are not a significant factor, as is the case with many vegetables on the

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<sup>(1)</sup> The brief of the Consumers' Association of Canada, p. 1.

Winnipeg market, import prices have been much more firm. It is, therefore, conceivable that free entry into Canada would result in substantial losses in production and employment while providing little benefit to consumers. The Board concluded that moderate tariff protection to maintain and to encourage a strong, efficient and viable Canadian growing and processing industry, would not be inimical to the consumer interest.

At the same time the Board considered that the permanent elimination of "off-season" duties on fresh fruits and vegetables would be of very considerable benefit to Canadian consumers. For 16 fresh fruits and vegetables an "off-season" ad valorem rate is currently applicable, in addition to a seasonal duty. This off-season rate is usually 10 p.c. In 1973, all off-season tariffs on fresh fruits and vegetables were temporarily suspended by budget measures introduced at that time. All but six have been reinstated subsequently, and these six will again become applicable on June 30, 1977 unless further suspended.

The Board has taken the view that off-season duties confer little or no direct benefit to growers and constitute an unnecessary cost to Canadian consumers. It has accordingly recommended that all such duties be eliminated.

The period during which seasonal duties are applied on fresh fruits and vegetables is also of particular interest to consumers. While the tariff schedule specifies maximum periods, seasonal duties need not apply for this full period. The working hypothesis is that each year the seasonal duty will apply only for as long as domestic supplies are available. When there are no supplies available there should not be a duty. In actual practice, this means that the dutiable period should not begin until that date when supplies are expected to be available in considerable volume and should be terminated when domestic supplies have run out. The Board is of the opinion that there is a need for better provisions to ensure, in the consumer interest, that seasonal duties are not in force when, as stated in the Minister's letter, "domestic products are in short supply." The Board has therefore recommended that particular attention be paid to the availability of domestic supply when the dates for application and removal of seasonal duties are being considered.

Seasonal duties for fresh fruits and vegetables are applied on a regional rather than on a national basis. This means that these duties are not necessarily in effect for the same duration and period at all border points across the country. This method of administering the duty is in itself a recognition of the consumer interest, as it permits consumers in one region, where local supplies are not yet or no longer available, to have duty-free access to imported produce, while in other regions where Canadian growers are marketing their crop, the seasonal duty is in effect. The Board has rejected the Horticultural Council's proposal to reduce the number of tariff regions, by combining the Atlantic with the central region, as being prejudicial to consumers in the Maritime Provinces. Without making a specific recommendation, the Board has suggested there might be merit in considering the creation of a separate Prairie region.



CHAPTER VII: RECOMMENDATIONS FOR TARIFF CHANGES

The Board recommends:

1. That section 15 of the Customs Tariff, "An Act Respecting the Duties of Customs," R.S. C-41, as amended, be repealed and replaced by the following:

15(1) The Minister may order

- (a) that in lieu of the free rate of duty, the specific duty, or ad valorem minimum, as the case may be, provided for in tariff items 8701-1, 8703-1, 8705-1, 8707-1, 8709-1 to 8711-1 inclusive, 8713-1 to 8717-1 inclusive, 8724-1, 8727-1 to 8730-1 inclusive, 8732-1, 8734-1, 8735-1, 8737-1, 8738-1, 8742-1, 9202-1, 9205-1, 9206-1, 9211-1, 9213-1, 9215-1, 9216-1, 9218-1 and 9219-1 shall apply, and
- (b) that with respect to tariff items 8712-1, 8731-1 and 8739-1, the additional duty provided for after tariff item 8748-1 shall apply, and
- (c) that with respect to any product falling within tariff items 8721-1, 8723-1, 8740-1, 8747-1 and 9221-1, the ad valorem duty shall be suspended and a free rate of duty shall apply

to goods described in the order imported through ports in a region or part of Canada during such period or periods as may be fixed by the Minister.

- (2) If, before the coming into force of an order under subsection (1)(a) or (1)(b), a person purchased goods for importation through a port in a region or part of Canada specified in the order, in the expectation in good faith that the free rate of duty would apply to the goods or that the additional duty would not apply to the goods, and, at the time of the coming into operation of the order the goods were in transit to the purchaser in Canada, the free rate of duty applies to the goods or the additional duty does not apply to the goods, notwithstanding the order.
- (3) If, before the revocation of an order under subsection (1)(c), a person purchased goods for importation through a port in a region or part of Canada specified in the order, in the expectation in good faith that a free rate of duty would apply to the goods, and at the time of the revocation of the order the goods were in transit to the purchaser in Canada, the free rate of duty applies to the goods, notwithstanding the revocation of the order.

2. That tariff item 9505-1 be retained unchanged.

3. That Schedule "A" to the Customs Tariff be amended by deleting therefrom tariff items 2400-1, 7120-1, 8305-1, 8310-1, 8400-1, 8500-1, 8701-1 to 8731-1 inclusive, 9201-1 to 9212-1 inclusive, 9300-1, 9401-1, 9402-1, 9500-1 and 9600-1, together with any preambles to or footnotes following the said items and by inserting therein the following tariff items, preambles and footnotes:

		<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
2400-1	Chicory roots, raw or green, with or without leaves .. ..... per pound	Free	Free	3 cts.
7120-1	Seed potatoes for propagat- ing purposes, under such regulations as the Minister may prescribe .. .. per one hundred pounds	55 cts. but not less than 7½ p.c.	55 cts. but not less than 7½ p.c.	75 cts. but not less than 10 p.c.
8400-1	Onion sets, the weight of the packages to be in- cluded in the weight for duty ..... per pound	Free	3 cts. but not less than 15 p.c.	6 cts. but not less than 30 p.c.
**	Vegetables, fresh, in their natural state, the weight of the packages to be in- cluded in the weight for duty:			
8701-1	Asparagus, n.o.p. .... ..... per pound	Free	5½ cts. but not less than 15 p.c., or Free	5½ cts. but not less than 15 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 14 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

\*\* This heading applies to items 8701-1 to 8748-1 inclusive.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8702-1	Asparagus for processing .....			
	..... per pound	Free	5 cts. but not less than 15 p.c.	5 cts. but not less than 15 p.c.
8703-1	Beans, snap, n.o.p. ....			
	..... per pound	Free	2 cts. but not less than 10 p.c., or Free	2 cts. but not less than 10 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 14 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

8704-1	Beans, snap, for processing ...			
	..... per pound	Free	1 ct. but not less than 10 p.c.	1 ct. but not less than 10 p.c.
8705-1	Beets, n.o.p. .... per pound	Free	1 ct. but not less than 10 p.c., or Free	1 ct. but not less than 10 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 34 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8706-1	Beets for processing .....			
	..... per pound	Free	1 ct. but not less than 20 p.c.	1 ct. but not less than 20 p.c.
8707-1	Broccoli, n.o.p. .... per pound	Free	2½ cts. but not less than 15 p.c., or Free	5 cts. but not less than 30 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 16 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8708-1	Broccoli for processing .....			
	..... per pound	Free	1½ cts. but not less than 10 p.c.	3 cts. but not less than 20 p.c.
8709-1	Brussels sprouts .... per pound	Free	3 cts. but not less than 12½ p.c., or Free	3 cts. but not less than 12½ p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 20 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8710-1	Cabbage, n.o.p. .... per pound	Free	1 $\frac{1}{4}$ cts. but not less than 15 p.c., or Free	1 $\frac{1}{4}$ cts. but not less than 15 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 34 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8711-1	Cabbage, Chinese, or Chinese lettuce ..... per pound	Free	1 $\frac{1}{4}$ cts. but not less than 15 p.c., or Free	1 $\frac{1}{4}$ cts. but not less than 15 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 30 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8712-1	Carrots, n.o.p. ....	Free	Free	30 p.c.
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When imported in packages five pounds or less, each, see additional duty following item 8748-1, which may apply.



		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8713-1	Carrots, baby, with a maximum length not exceeding $4\frac{1}{2}$ inches ..... per pound	Free	1 ct. but not less than 5 p.c., or Free	1 ct. but not less than 5 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 40 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages of five pounds or less, each, see additional duty following item 8748-1.

8714-1	Cauliflower ..... per pound	Free	1 ct. but not less than 5 p.c., or Free	1 ct. but not less than 5 p.c. or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 20 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8715-1	Celery ..... per pound	Free	2 cts. but not less than 15 p.c., or Free	2 cts. but not less than 15 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 24 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

8716-1	Corn-on-the-cob ..... per pound	Free	1½ cts. but not less than 15 p.c., or Free	1½ cts. but not less than 15 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

8717-1	Cucumbers, n.o.p. ... per pound	Free	2¼ cts. but not less than 15 p.c., or Free	2¼ cts. but not less than 15 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 30 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8718-1	Cucumbers for processing .....			
	..... per pound	Free	1 ct. but not less than 10 p.c.	2 cts. but not less than 20 p.c.
8719-1	Eggplant .....	Free	Free	Free
8720-1	Escarole, endive and chicory ..	Free	Free	30 p.c.
8721-1	Garlic .....	Free	5 p.c.	5 p.c.
<p>When the duty is not suspended by virtue of section 15(1)(c) of this Act and imported in packages five pounds or less, each, see additional duty following item 8748-1.</p>				
8722-1	Horseradish .....	Free	Free	30 p.c.
8723-1	Leeks .....	Free	5 p.c.	5 p.c.
8724-1	Lettuce ..... per pound	Free	1½ cts. but not less than 15 p.c., or Free	1½ cts. but not less than 15 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 20 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages of five pounds or less, each, see additional duty following item 8748-1.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8725-1	Mushrooms, n.o.p. ....			
	..... per pound	1 ct.	4½ cts.	5 cts.
			but not	but not
			less than	less than
			10 p.c.	12½ p.c.
8726-1	Mushrooms for processing .....			
	..... per pound	1 ct.	4½ cts.	5 cts.
			but not	but not
			less than	less than
			10 p.c.	12½ p.c.
8727-1	Onions and shallots, green ....			
	..... per pound	Free	2½ cts.	2½ cts.
			but not	but not
			less than	less than
			12½ p.c.,	12½ p.c.,
			or Free	or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 22 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8728-1	Onions, Spanish-type, for processing .....	per pound	Free	1½ cts.	1½ cts.
				but not	but not
				less than	less than
				15 p.c.,	15 p.c.,
				or Free	or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8729-1	Onions, n.o.p., and dry shallots ..... per pound	Free	1½ cts. but not less than 15 p.c., or Free	1½ cts. but not less than 15 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 46 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages of five pounds or less, each, see additional duty following item 8748-1.

8730-1	Parsley ..... per pound	Free	1¾ cts. but not less than 10 p.c., or Free	1¾ cts. but not less than 10 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 16 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8731-1	Parsnips .....	Free	Free	Free
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When imported in packages five pounds or less, each, see additional duty following item 8748-1, which may apply.



		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8732-1	Peas, green, n.o.p. ....			
	..... per pound	Free	2 cts. but not less than 10 p.c., or Free	2 cts. but not less than 10 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8733-1	Peas, green, whether or not shelled or chilled, for processing ..... per pound	Free	1 ct. but not less than 10 p.c.	1 ct. but not less than 10 p.c.
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8734-1	Peppers, including pimentos ... ..... per pound	Free	2 cts. but not less than 10 p.c., or Free	2 cts. but not less than 10 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

	<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8735-1 Potatoes, n.o.p. ....			
... per one hundred pounds	55 cts.	55 cts.	75 cts.
	but not	but not	but not
	less than	less than	less than
	7½ p.c.,	7½ p.c.,	10 p.c.,
	or Free	or Free	or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 52 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

8736-1 Potatoes for processing ....			
... per one hundred pounds	55 cts.	55 cts.	75 cts.
	but not	but not	but not
	less than	less than	less than
	15 p.c.	15 p.c.	20 p.c.
8737-1 Radishes ..... per pound	Free	1 ct.	1 ct.
		but not	but not
		less than	less than
		10 p.c.,	10 p.c.,
		or Free	or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 26 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

When subject to the specific duty or ad valorem duty and imported in packages five pounds or less, each, see additional duty following item 8748-1.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8738-1	Rhubarb ..... per pound	Free	1 ct. but not less than 5 p.c. or Free	1 ct. but not less than 5 p.c. or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

8739-1	Spinach .....	Free	Free	30 p.c.
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When imported in packages five pounds or less, each, see additional duty following item 8748-1, which may apply.

8740-1	Squashes of all kinds, of the genus <u>Cucurbita</u> , including pumpkins, vegetable marrow and zucchini .....	Free	5 p.c.	5 p.c.
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8741-1	Sweet potatoes and yams ..... ..... per one hundred pounds	Free	Free	15 cts.
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8742-1	Tomatoes, n.o.p. .... ..... per pound	Free	2½ cts. but not less than 15 p.c., or Free	2½ cts. but not less than 15 p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 32 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
8743-1	Tomatoes for processing .....			
	..... per pound	Free	1 ct. but not less than 15 p.c.	1 ct. but not less than 15 p.c.
8744-1	Turnips and rutabagas .....	Free	Free	30 p.c.
8745-1	Watercress and other cresses ..	Free	Free	30 p.c.
8746-1	Witloof .....	Free	Free	30 p.c.
	N.o.p.:			
8747-1	Of a class or kind produced in Canada .....	Free	5 p.c.	5 p.c.
8748-1	Of a class or kind not pro- duced in Canada .....	Free	Free	Free

When the beans (snap), beets, Brussels sprouts, carrots (baby), cauliflower, celery, corn-on-the-cob, garlic, lettuce, onions and shallots, potatoes or radishes specified in items 8703-1, 8705-1, 8709-1, 8713-1, 8714-1, 8715-1, 8716-1, 8721-1, 8724-1, 8729-1, 8735-1 and 8737-1 are not admissible free of duty and are imported in packages weighing five pounds or less, each, or when the carrots, parsnips or spinach specified in tariff items 8712-1, 8731-1 and 8739-1 are imported in packages weighing five pounds or less, each, they shall, in addition to any other duty to which they may be liable, be subject to a duty of

Free	5 p.c.	10 p.c.
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Except that in any 12 month period ending 31st March, this duty shall not be applicable to carrots for more than 40 weeks which may be divided into two separate periods, to parsnips for more than 36 weeks which may be divided into two separate periods, or to spinach for more than 12 weeks.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
**	Fruits, fresh, in their natural state, the weight of the packages to be included in the weight for duty:			
9201-1	Apples ..... per pound	Free	Free	1 ct.
9202-1	Apricots, n.o.p. ....	Free	2½ cts. but not less than 12½ p.c., or Free	2½ cts. but not less than 12½ p.c., or Free
<p>In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.</p>				
9203-1	Apricots for processing ..... ..... per pound	Free	1½ cts. but not less than 12½ p.c.	1½ cts. but not less than 12½ p.c.
9204-1	Blueberries .....	Free	Free	Free
9205-1	Cherries, sour ..... per pound	Free	4 cts. but not less than 12½ p.c., or Free	4 cts. but not less than 12½ p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

\*\* This heading applies to items 9201-1 to 9222-1 inclusive.



		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
9206-1	Cherries, sweet, n.o.p. .... ..... per pound	Free	5 cts. but not less than 12½ p.c., or Free	5 cts. but not less than 12½ p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

9207-1	Cherries, sweet, for processing ..... per pound	Free	4 cts. but not less than 12½ p.c.	4 cts. but not less than 12½ p.c.
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9208-1	Cranberries .....	Free	Free	Free
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9209-1	Grapes, n.o.p. ....	Free	Free	Free
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9210-1	Grapes for processing .....	Free	Free	Free
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9211-1	Peaches, n.o.p., including nectarines .....	Free	3 cts. but not less than 12½ p.c., or Free	3 cts. but not less than 12½ p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 14 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

9212-1	Peaches, including nectarines, for processing .... per pound	Free	2 cts. but not less than 12½ p.c.	2 cts. but not less than 12½ p.c.
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		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
9213-1	Pears, n.o.p. .... per pound	Free	2 cts. but not less than 12½ p.c., or Free	2 cts. but not less than 12½ p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 26 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

9214-1	Pears for processing ..... ..... per pound	Free	1½ cts. but not less than 12½ p.c.	1½ cts. but not less than 12½ p.c.
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9215-1	Plums, n.o.p. .... per pound	Free	2 cts. but not less than 12½ p.c., or Free	2 cts. but not less than 12½ p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

9216-1	Prune plums, n.o.p. .... ..... per pound	Free	1½ cts. but not less than 12½ p.c., or Free	1½ cts. but not less than 12½ p.c., or Free
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In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
9217-1	Prune plums for processing ...			
	..... per pound	Free	$\frac{3}{4}$ cts. but not less than $12\frac{1}{2}$ p.c.	$\frac{3}{4}$ cts. but not less than $12\frac{1}{2}$ p.c.

9218-1	Raspberries and loganberries ..			
	..... per pound	Free	$2\frac{1}{2}$ cts. but not less than $7\frac{1}{2}$ p.c., or Free	$2\frac{1}{2}$ cts. but not less than $7\frac{1}{2}$ p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 6 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

9219-1	Strawberries, n.o.p. ....			
	..... per pound	Free	3 cts. but not less than 10 p.c., or Free	3 cts. but not less than 10 p.c., or Free

In any 12 month period ending 31st March, the specific duty or ad valorem duty, as the case may be, shall not be maintained in force in excess of 8 weeks, and the Free rate shall apply whenever the specific duty or ad valorem duty is not in effect.

		<u>B.P.</u>	<u>M.F.N.</u>	<u>General</u>
9220-1	Strawberries for processing ... ..... per pound	Free	4 cts. but not less than 15 p.c.	4 cts. but not less than 15 p.c.
9221-1	Berries, edible, n.o.p.: of a class or kind produced in Canada .....	Free	10 p.c.	10 p.c.
9222-1	of a class or kind not produced in Canada .....	Free	Free	Free
9500-1	Cantaloupes .....	Free	Free	Free
9600-1	Fruits, fresh, in their natural state, n.o.p. ....	Free	Free	20 p.c.

Parula M. McInnis  
Chairman

Handreth  
First Vice-Chairman

Norm Deachman  
Member

H. Kelburn  
Member

K. Martin  
Member

Ottawa, March 2, 1977









APPENDICES

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Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
7120-1	Seed potatoes for propagating purposes, under such regulations as the Minister may prescribe ..... per one hundred pounds	37½ cts.	37½ cts.	75 cts.
8305-1	Potatoes, in their natural state, n.o.p. .... per one hundred pounds	37½ cts.	37½ cts.	75 cts.
8310-1	Sweet potatoes and yams, in their natural state ..... per one hundred pounds	Free	Free	15 cts.
8400-1	Onion sets and shallots, in their natural state ..... per one hundred pounds	Free	15 p.c.	30 p.c.
8500-1	Mushrooms, fresh, the weight of the packages to be included in the weight for duty ..... per pound	1 ct.	4½ cts.	5 cts.
**	Vegetables, fresh, in their natural state, the weight of the packages to be included in the weight for duty:			
8701-1	Artichokes .....	Free	Free	30 p.c.
8702-1	Asparagus ..... per pound	Free	3½ cts. or 10 p.c.	3½ cts. or 10 p.c.

In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 14 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

\*\* (This heading applies to items 8701-1 to 8731-1 incl.)

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
8703-1	Beans, green ..... per pound	Free	1½ cts. or Free	1½ cts. or Free

In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 14 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

8704-1	Beets ..... per pound	Free	1 ct. or 10 p.c.	1 ct. or 10 p.c.
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In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 26 weeks which may be divided into two separate periods, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

*From November 19, 1974 to  
June 30, 1977.*

8704-1	Beets ..... per pound	Free	1 ct. or Free	1 ct. or Free
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Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
<i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 26 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.</i>				
8705-1	Brussels sprouts ..per pound	Free	3 cts. or 10 p.c. or Free	3 cts. or 10 p.c. or Free

The Free rate shall apply during the months of January, February, March, April, May and June.

During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 16 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

8706-1	Cabbage ..... per pound	Free	Free or 9/10 ct. or 10 p.c.	Free or 9/10 ct. or 10 p.c.
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The Free rate shall apply during the months of March and April.

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
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During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 30 weeks which may be divided into two separate periods, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

*From November 19, 1974 to June 30, 1977.*

8706-1	<i>Cabbage ..... per pound</i>	<i>Free</i>	<i>9/10 ct. or Free</i>	<i>9/10 ct. or Free</i>
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*In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 30 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.*

8707-1	<i>Carrots ..... per pound</i>	<i>Free</i>	<i>0.5 ct. or Free</i>	<i>1 ct. or Free</i>
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In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 40 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
8708-1	Cauliflower ..... per pound	Free	$\frac{3}{4}$ ct. or 10 p.c. or Free	$\frac{3}{4}$ ct. or 10 p.c. or Free

The Free rate shall apply during the months of January, February, March, April and May.

During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 20 weeks which may be divided into two separate periods, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

8709-1	Celery ..... per pound	Free	2 cts. or Free	2 cts. or Free
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In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 24 weeks, and the Free rate shall apply whenever the specific duty is not in effect.

8710-1	Corn on the cob ... per pound	Free	$1\frac{1}{2}$ cts. or Free	$1\frac{1}{2}$ cts. or Free
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## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</p>				
<p>When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.</p>				
8711-1	Cucumbers when imported by manufacturers for use in the manufacture of pickles or preserves .....	Free	10 p.c.	20 p.c.
8712-1	Cucumbers, n.o.p. ..per pound	Free	2½ cts. or 10 p.c.	2½ cts. or 10 p.c.
<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 22 weeks which may be divided into two separate periods, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</p>				
8713-1	Eggplant .....	10 p.c. or Free	10 p.c. or Free	30 p.c. or Free
<p>In any 12 month period ending 31st March, the ad valorem duty shall not be maintained in force in excess of 8 weeks, and the Free rate shall apply whenever the ad valorem duty is not in effect.</p>				
8714-1	Horseradish .....	Free	Free	30 p.c.

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
8715-1	Lettuce ..... per pound	Free	.85 ct. or Free	.85 ct. or Free

In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 26 weeks which may be divided into two separate periods and the Free rate shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

8716-1	Okra .....	Free	Free	30 p.c.
8717-1	Onions, n.o.p. ... per pound	Free	1½ cts. or 10 p.c.	1½ cts. or 10 p.c.

In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 44 weeks which may be divided into two separate periods, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

*From November 19, 1974 to June 30, 1977.*

8717-1	Onions, n.o.p. ... per pound	Free	1½ cts. or Free	1½ cts. or Free
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*In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 44 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.*

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
8718-1	Parsley .....	Free	10 p.c. or Free	30 p.c. or Free

In any 12 month period ending 31st March, the ad valorem duty shall not be maintained in force in excess of 16 weeks, and the Free rate shall apply whenever the ad valorem duty is not in effect.

8719-1	Parsnips ..... per pound	Free	Free	Free
8720-1	Peas, green ..... per pound	Free	2 cts. or 10 p.c. or Free	2 cts. or 10 p.c. or Free

The Free rate shall apply during the months of October, November, December, January, February, March and April.

During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 12 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

When subject to specific rates of duty and imported in packages five pounds or less, each, see additional duty following item 8731-1.

*From November 19, 1974 to  
June 30, 1977.*

8720-1	Peas, green ..... per pound	Free	2 cts. or Free	2 cts. or Free
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Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
	<i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</i>			
8721-1	Peppers ..... per pound	Free	1 ct. or Free	1 ct. or Free
	<i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 8 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</i>			
8722-1	Rhubarb ..... per pound	Free	$\frac{1}{2}$ ct. or 10 p.c.	$\frac{1}{2}$ ct. or 10 p.c.
	<i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 10 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</i>			
	<i>From November 19, 1974 to June 30, 1977.</i>			
8722-1	Rhubarb ..... per pound	Free	$\frac{1}{2}$ ct. or Free	$\frac{1}{2}$ ct. or Free
	<i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty is not in effect</i>			
8723-1	Spinach ..... per pound	Free	Free	30 p.c.

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
8724-1	Tomatoes ..... per pound	Free	Free or 1½ cts. or 10 p.c.	Free or 1½ cts. or 10 p.c.

The Free rate shall apply during the months of January, February and March.

During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 32 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

8725-1	Watercress .....	Free	Free	30 p.c.
8726-1	Whitloof or endive .....	Free	Free	30 p.c.
8727-1	Broccoli .....	Free	10 p.c. or Free	30 p.c. or Free

In any 12 month period ending 31st March, the ad valorem duty shall not be maintained in force in excess of 16 weeks, and the Free rate shall apply whenever the ad valorem duty is not in effect.

8728-1	Green onions ..... per pound	Free	1½ cts. or 5 p.c.	1½ cts. or 10 p.c.
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In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 44 weeks which may be divided into two separate periods, and the ad valorem duty shall apply whenever the specific duty is not in effect.

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
	<i>From November 19, 1974 to June 30, 1977.</i>			
8728-1	<i>Green onions ..... per pound</i>	<i>Free</i>	<i>1½ cts. or Free</i>	<i>1½ cts. or Free</i>
	<i>In any 12 month period end- ing 31st March, the specific duty shall not be maintained in force in excess of 44 weeks which may be divided into two separate periods, and the Free rate shall apply whenever the specific duty is not in effect.</i>			
8729-1	Radishes .....	Free	10 p.c. or Free	30 p.c. or Free
	<i>In any 12 month period end- ing 31st March, the ad valorem duty shall not be maintained in force in excess of 26 weeks, and the Free rate shall apply whenever the ad valorem duty is not in effect.</i>			
8730-1	Turnips .....	Free	Free	30 p.c.
8731-1	N.o.p. ....	Free	Free	30 p.c.
	- - - - -			
	<i>When the beans (green), beets, Brussels sprouts, carrots, cauliflower, corn on the cob, lettuce or peas specified in items 8703-1, 8704-1, 8705-1, 8707-1, 8708-1, 8710-1, 8715-1 and 8720-1, are subject to the specific rates of duty and are imported in packages weighing five pounds or less, each, they shall be subject to an additional duty of ....</i>			
		Free	5 p.c.	10 p.c.

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
<p>** Fruits, fresh, in their natural state, the weight of the packages to be included in the weight for duty:</p>				
9201-1	Apricots ..... per pound	Free	1½ cts. or Free	1½ cts. or Free
<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</p>				
9202-1	Cherries, sour ... per pound	Free	3 cts. or Free	3 cts. or Free
<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 10 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</p>				
9203-1	Cherries, sweet .. per pound	Free	2 cts. or 10 p.c.	2 cts. or 10 p.c.
<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 7 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</p>				
9204-1	Cranberries ..... per pound	Free	5 p.c.	10 p.c.

\*\* (This heading applies to items 9201-1 to 9212-1 incl.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
9205-1	Peaches ..... per pound	Free	1½ cts. or 10 p.c. or Free	1½ cts. or 10 p.c. or Free
	<p>The Free rate shall apply during the months of November, December, January, February, March and April.</p> <p>During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 14 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</p>			
9206-1	Pears ..... per pound	Free	Free or 1 ct. or 10 p.c.	Free or 1 ct. or 10 p.c.

The Free rate shall apply during the months of March, April, May and June.

During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 22 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.

*Australian Trade Agreement*  
*During the months of*  
*February, March and April ...*  
*Free*

*British Preferential Tariff*  
*during the other months of*  
*the year.*

## Appendix A (cont.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
	<i>New Zealand Trade Agreement</i> <i>During the months of</i> <i>February, March, April</i> <i>and May ..... Free</i>  <i>British Preferential Tariff</i> <i>during the other months of</i> <i>the year.</i>			
	<i>Union of South Africa Trade</i> <i>Agreement</i> <i>During the months of</i> <i>February, March and</i> <i>April ..... Free</i>			
9207-1	Plums .....	Free	10 p.c. or Free	10 p.c. or Free
	In any 12 month period end- ing 31st March, the 10 per cent duty shall not be main- tained in force in excess of 12 weeks, and the Free rate shall apply whenever the 10 per cent duty is not in effect.			
9208-1	Prune plums ..... per pound	Free	1½ cts. or Free	1½ cts. or Free
	In any 12 month period end- ing 31st March, the specific duty shall not be maintained in force in excess of 12 weeks, and the Free rate shall apply whenever the specific duty is not in effect.			
9210-1	Raspberries and loganberries ..... per pound	Free	2 cts. or 10 p.c.	2 cts. or 10 p.c.



Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
	<p>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 6 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</p>			
	<p><i>From November 19, 1974 to June 30, 1977.</i></p>			
9210-1	Raspberries and loganberries ..... per pound	Free	2 cts. or Free	2 cts. or Free
	<p><i>In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 6 weeks, and the Free rate shall apply whenever the specific duty is not in effect.</i></p>			
9211-1	Strawberries ..... per pound	Free	Free or 1-3/5 cts. or 10 p.c.	Free or 1-3/5 cts. or 10 p.c.
	<p>The Free rate shall apply during the months of September, October, November, December, January, February and March.</p>			
	<p>During the remaining months in any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 6 weeks, and the 10 per cent duty shall apply whenever the specific duty is not in effect.</p>			
9212-1	Berries, edible, n.o.p. ....	Free	Free	20 p.c.

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## Appendix A (concl.)

Reference 152 - Relevant Tariff Items

<u>Tariff Items</u>	<u>Nomenclature</u>	<u>British Prefer- ential Tariff</u>	<u>Most- Favoured- Nation Tariff</u>	<u>General Tariff</u>
9300-1	Apples, fresh, in their natural state, the weight of the packages to be included in the weight for duty ..... per pound	Free	Free	1 ct.
	Grapes, fresh, in their natural state, the weight of the packages to be included in the weight for duty:			
9401-1	Vitis Vinifera species ..... ..... per pound	Free	Free	2 cts.
9402-1	Vitis Labrusca species ..... ..... per pound	Free	1 ct. or Free	1 ct. or Free
	In any 12 month period end- ing 31st March, the specific duty shall not be maintained in force in excess of 15 weeks, and the Free rate shall apply whenever the specific duty is not in effect.			
- - - - -				
9500-1	Cantaloupes and muskmelons, the weight of the packages to be included in the weight for duty ..... per pound	Free	1½ cts. or Free	1½ cts. or Free
	In any 12 month period ending 31st March, the specific duty shall not be maintained in force in excess of 8 weeks, and the Free rate shall apply whenever the specific duty is not in effect.			
9505-1	Melons, n.o.p. .... each	Free	Free	3 cts.
9600-1	Fruits, fresh, in their natural state, n.o.p. ....	Free	15 p.c.	20 p.c.
	GATT .....		Free	

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present		Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty	
		Rates of Duty			Rates of Duty				
		E.P.	M.F.N.		Gen.	B.P.	M.F.N.		Gen.
<u>Fresh Vegetables</u>									
7120-1	Seed potatoes	37½¢	37½¢	75¢	52	75¢ (a) 37½¢	75¢ (a) 37½¢	1.12½ (a) 75¢	52
8305-1	Table potatoes	37½¢	37½¢	75¢	52	75¢ (b) 37½¢	75¢ (b) 37½¢	1.12½ (b) 75¢	52*
8400-1	Onion sets and shallots	Free	15 p.c.	30 p.c.	52	20 p.c.	20 p.c.	30 p.c. (Shallots to tariff item 8728-1)	52
8500-1	Mushrooms	1¢	4½¢	5¢	52	1¢	5¢ + 25 p.c.	10¢ + 25 p.c.	52
8702-1	Asparagus	Free	3½¢ or 10 p.c.	3½¢ or 10 p.c.	14	Free	5½¢ or 20 p.c.	5½¢ or 20 p.c.	20s
8703-1	Beans, green	Free	1½¢ or Free	1½¢ or Free	14*	Free	4¢ or 20 p.c.	4¢ or 20 p.c.	16s*
8704-1	Beets	Free	1¢ or 10 p.c.	1¢ or 10 p.c.	26*	Free	1½¢ or 15 p.c.	1½¢ or 15 p.c.	26s*
8705-1	Brussels sprouts	Free	3¢ or 10 p.c. or Free	3¢ or 10 p.c. or Free	16*	5¢ or 20 p.c.	5¢ or 20 p.c.	5¢ or 20 p.c.	20*

Appendix B

Appendix B

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present			Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty				Rates of Duty			
		B.P.	M.F.N.	Gen.		B.P.	M.F.N.	Gen.	
8706-1	Cabbage	Free	9/10¢ or 10 p.c. or Free	9/10¢ or 10 p.c. or Free	30	1½¢ or 20 p.c.	1½¢ or 20 p.c.	1½¢ or 20 p.c.	40s
New Item	Chinese cabbage	-	-	-	-	1½¢ or 20 p.c.	1½¢ or 20 p.c.	1½¢ or 20 p.c.	30
8707-1	Carrots	Free	0.5¢ or Free	1¢ or Free	40*	Free	0.5¢	1¢	20s*
New Item	Carrots, baby	-	-	-	-	5¢ or 20 p.c.	5¢ or 20 p.c.	5¢ or 20 p.c.	20s*
8708-1	Cauliflower	Free	¾¢ or 10 p.c. or Free	¾¢ or 10 p.c. or Free	20*	Free	15 p.c.	15 p.c.	30s*
8709-1	Celery	Free	2¢ or Free	2¢ or Free	24	Free	2¢ or 20 p.c.	2¢ or 20 p.c.	24*
8710-1	Corn-on-the-cob	Free	1½¢ or Free	1½¢ or Free	12*	Free	1½¢	1½¢	16*
8711-1	Cucumbers (mfg.)	Free	10 p.c.	20 p.c.	52	Delete and combine with 8712-1			
8712-1	Cucumbers, n.o.p.	Free	2½¢ or 10 p.c.	2½¢ or 10 p.c.	22	Free	3¢ or 20 p.c.	3¢ or 20 p.c.	30s

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present		Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty	
		Rates of Duty			Rates of Duty				
		B.P.	M.F.N.		Gen.	B.P.	M.F.N.		Gen.
8713-1	Eggplant	10 p.c. or Free	10 p.c. or Free	30 p.c. or Free	8	10 p.c.	10 p.c.	30 p.c.	8
New Item	Garlic	-	-	-	-	20 p.c.	20 p.c.	20 p.c.	52
8714-1	Horseradish	Free	Free	30 p.c.	52	Free	Free	30 p.c.	52
8715-1	Lettuce	Free	.85¢ or Free	.85¢ or Free	26*	Free	1.5¢ or 15 p.c.	1.5¢ or 15 p.c.	20s*
8716-1	Okra	Free	Free	30 p.c.	52	Free	Free	30 p.c.	-
8717-1	Onions, n.o.p.	Free	1½¢ or 10 p.c.	1½¢ or 10 p.c.	44	1½¢	1½¢	1½¢	52s*
8718-1	Parsley	Free	10 p.c. or Free	30 p.c. or Free	16	Free	20 p.c.	30 p.c.	20
8719-1	Parsnips	Free	Free	Free	-	15 p.c.	15 p.c.	15 p.c.	36s*
8720-1	Peas, green	Free	2¢ or 10 p.c. or Free	2¢ or 10 p.c. or Free	12*	Free	2¢ or 15 p.c.	2¢ or 15 p.c.	14
8721-1	Peppers	Free	1¢ or Free	1¢ or Free	8	2½¢ or 15 p.c.	2½¢ or 15 p.c.	2½¢ or 15 p.c. (Add pimientos)	12

Appendix B (cont.)

(Add pimientos)

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present			Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty				Rates of Duty			
		B.P.	M.F.N.	Gen.		B.P.	M.F.N.	Gen.	
8722-1	Rhubarb	Free	½¢ or 10 p.c.	10	Free	1¢	1¢	12	
8723-1	Spinach	Free	Free	-	Free	10 p.c.	30 p.c.	12*	
8724-1	Tomatoes	Free	1½¢ or 10 p.c. or Free	32	3½¢ or 20 p.c.	3½¢ or 20 p.c.	3½¢ or 20 p.c.	36s	
8725-1	Watercress	Free	Free	-	Free	Free	30 p.c.	-	
8726-1	Whitloof or Endive	Free	Free	-	Free	Free	30 p.c.	-	
8727-1	Broccoli	Free	10 p.c. or Free	16	Free	20 p.c.	30 p.c.	20s	
8728-1	Green onions	Free	1½¢ or 5 p.c.	44	Free	3¢ or 20 p.c. (Add shallots)	3¢ or 20 p.c.	32s	
8729-1	Radishes	Free	10 p.c. or Free	26	Free	20 p.c.	30 p.c.	26*	
8730-1	Turnips	Free	Free	-	Free	Free (Add rutabagas)	30 p.c.	-	

Appendix B (cont.)



Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present		Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty			Rates of Duty			
		B.P.	M.F.N.		Gen.	B.P.	M.F.N.	
8731-1	N.o.p.	Free	Free	30 p.c.	20 p.c.	20 p.c.	30 p.c.	-
					(Add genus grown in Canada)			
New Item	N.o.p. (of genus not grown in Canada)				Free	Free	Free	-
*Additional duty for consumer packs <sup>(c)</sup>		Free	5 p.c.	10 p.c.	10 p.c.	10 p.c.	10 p.c.	-

(a) Rate for imports in excess of 300,000 cwt.

(b) Rate for imports in excess of 100,000 cwt.

(c) For potatoes and onions - packages 10 lb. or less; all other commodities - packages, 5 lb. or less.  
 s Split period for seasonal duty.

Source: Canadian Customs Tariff and The Canadian Horticultural Council brief.

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present			Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty				Rates of Duty			
		B.P.	M.F.N.	Gen.		B.P.	M.F.N.	Gen.	
Fresh Fruits									
9201-1	Apricots	Free	1½¢ or Free	1½¢ or Free	10	Free	3¢ or 20 p.c.	3¢ or 20 p.c.	10
9202-1	Cherries, sour	Free	3¢ or Free	3¢ or Free	10	Free	5¢ or 20 p.c.	5¢ or 20 p.c.	10
9203-1	Cherries, sweet	Free	2¢ or 10 p.c.	2¢ or 10 p.c.	7	Free	5¢ or 20 p.c.	5¢ or 20 p.c.	10
9204-1	Cranberries	Free	5 p.c.	10 p.c.	-	Free	Free	10 p.c.	-
9205-1	Peaches	Free	1½¢ or 10 p.c. or Free	1½¢ or 10 p.c. or Free	14	Free	3¢ or 20 p.c.	3¢ or 20 p.c.	16
9206-1	Pears	Free	1¢ or 10 p.c. or Free	1¢ or 10 p.c. or Free	22	2½¢ or 20 p.c.	2½¢ or 20 p.c.	2½¢ or 20 p.c.	30
9207-1	Plums	Free	10 p.c. or Free	10 p.c. or Free	12	Free	20 p.c.	20 p.c.	12
9208-1	Prune plums	Free	1½¢ or Free	1½¢ or Free	12	Free	4¢ or 20 p.c.	4¢ or 20 p.c.	12

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present			Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty				Rates of Duty			
		B.P.	M.F.N.	Gen.		B.P.	M.F.N.	Gen.	
9209-1	Quinces	Free	Free	20 p.c.	-	Free	Free (Delete Nectarines)	20 p.c.	-
New Item	Nectarines	-	-	-	-	Free	20 p.c.	20 p.c.	16
9210-1	Raspberries and loganberries	Free	2¢ or 10 p.c.	2¢ or 10 p.c.	6	Free	2½¢ or 20 p.c.	2½¢ or 20 p.c.	12
9211-1	Strawberries	Free	1-3/5¢ or 10 p.c. or Free	1-3/5¢ or 10 p.c. or Free	6	3¢ or 15 p.c.	3¢ or 15 p.c.	3¢ or 15 p.c.	10
New Item	Strawberries (hulled)	-	-	-	-	5¢ or 15 p.c.	5¢ or 15 p.c.	5¢ or 15 p.c.	52
9212-1	Berries, edible, n.o.p.	Free	Free	20 p.c.	-	20 p.c.	20 p.c.	30 p.c.	-
New Item	Blueberries	-	-	-	-	Free	Free	30 p.c.	-
New Item	Gooseberries	-	-	-	-	Free	Free	30 p.c.	-
9300-1	Apples	Free	Free	1¢	-	Free	Free	1¢	-

Appendix B (cont.)

Tariff Schedule  
Proposed by The Canadian Horticultural Council

Tariff Items	Commodity	Present			Maximum Period of Application of Seasonal Duty	Proposed			Maximum Period of Application of Seasonal Duty
		Rates of Duty				Rates of Duty			
		B.P.	M.F.N.	Gen.		B.P.	M.F.N.	Gen.	
9401-1	Grapes, Vitis Vinifera	Free	Free	2¢	-	2¢ or 20 p.c.	2¢ or 20 p.c.	2¢ or 20 p.c.	15
9402-1	Grapes, Vitis Labrusca	Free	1¢ or Free	1¢ or Free	15	2¢ or 20 p.c.	2¢ or 20 p.c.	2¢ or 20 p.c.	15
9500-1	Cantaloupes and muskmelons	Free	1½¢ or Free	1½¢ or Free	8	Free	2¢ or 20 p.c.	2¢ or 20 p.c.	8
9505-1	Melons, n.o.p.	Free	Free	3¢	-	Free	Free	3¢	-
9600-1	Fruit, fresh, n.o.p. GATT	Free	15 p.c. Free	20 p.c.					
9600-1	Fruit, n.o.p. (of genus grown in Canada)	-	-	-	-	20 p.c.	20 p.c.	30 p.c.	-
New Item	Fruit, n.o.p. (of genus not grown in Canada)	-	-	-	-	Free	Free	30 p.c.	-

Source: Canadian Customs Tariff and The Canadian Horticultural Council.

Remission of Duties

Pursuant to section 17 of the Financial Administration Act, the Governor General in Council, upon recommendation of the Minister of Finance and the Treasury Board, may order the duties paid by Canadian processors on fresh fruits and vegetables imported for processing to be remitted. "Fruits and Vegetables Remission Orders" are published in the Canada Gazette.

Upon receiving a submission for remission of duty, the Minister of Finance and the Treasury Board recommend remission when they are satisfied that such imports could not have been obtained domestically. This determination is arrived at following consultation with other government departments, e.g., Agriculture Canada, and with the organizations representing growers and processors.

The Canadian Food Processors Association and The Canadian Horticultural Council have established a joint committee for the purpose of examining prospective requests for remission of duty and subsequently advising government. A request will be supported if the processors meet the following criteria:

- 1.(a) that they have legally contracted in Canada for their total annual crop requirements; and  
  
(b) that due to crop conditions beyond their control, they were unable to secure such contracted amounts, first from contract growers or secondly from other reasonably accessible sources in Canada.
2. In any one year, a processor may apply for remission of duty on that tonnage of raw product not available in Canada that is required to bring their total tonnage for processing up to 100 per cent average of the best three years of the past five years. Duty will not be remitted on any part of the importation that exceeds this amount. Certification must be supplied that proves that the entire requirements had been contracted for during the year in question. If, however, contracts for Canadian production represents more than 110 per cent, the Committee may take this into account in determining the amount of remission of duty that qualifies.
3. That such imported tonnage of raw product is consigned to the processor as the importer of note and is not for resale on the fresh market or divertible to the fresh market; and
4. That the factory door price of the imports after the duty has been remitted is not less than that paid for similar quality Canadian products.

With respect to newly established processors with less than three years operating experience, and to whom the 110 per cent criteria above would not be applicable, guidelines would be based on his contracted acreage from the period of commencement of his operation. Moreover, where the price may not truly reflect higher grades

## Appendix C (concl.)

or qualities of certain imported products, this factor will be taken into account when considering requests for remission of duty on specific crops. It is the responsibility of the importer to supply evidence to support grading documentation.

The following table lists the applications approved since 1968.

Remission of Duty Program: Applications Approved<sup>(a)</sup>

<u>Year of Importation</u>	<u>Product</u>	<u>Quantity</u> 1000 lb.	<u>Estimated Duty Remitted</u> \$
1968	Peaches	1,757	17,400
	Pears	1,277	8,000
1969	Peaches	4,326	64,300
	Pears	8,273	45,600
	Strawberries	5,444	83,200
	Peppers, red & green	400	4,000
1970	Prune plums	930	14,000
1972	Green beans	2,506	36,000
	Cucumbers	1,022	5,500
	Tomatoes	565	8,000
	Prune plums	330	4,700
	Pears	167	900
	Grapes	1,069	11,200
	Strawberries	329	8,900
1973	Sweet cherries	42	800
	Pears	8,051	56,200
	Strawberries	257	5,000
	Broccoli	207	1,700
	Cauliflower	119	900
	Cucumbers	1,976	16,600
	Asparagus	5,300	153,300
	Silverskin onions (pickled)	323	13,900
1974	Broccoli	145	2,000
	Beets	589	2,125
	Cucumbers	2,797	24,700
	Pears	6,220	62,200
	Asparagus	3,288	115,100
	Beans	2,535	40,600
	Strawberries	248	8,700
	Silverskin onions (pickled)	325	20,700
1975	Asparagus	4,577	175,600
	Apricots	71	1,100
	Pears	2,211	17,300
	Silverskin onions (pickled)	84	7,100
	Cucumbers	1,232	12,800

(a) Based on information supplied by the Department of Finance.



List of Marketing Boards for Fruits and Vegetables in Canada, by  
Province, and Regulated Commodities; 1975

BRITISH COLUMBIA

Fruit:

British Columbia Cranberry Marketing Board:

cranberries, fresh and processing

British Columbia Coast Vegetable Marketing Board:

strawberries for processing

British Columbia Tree Fruit Marketing Board:

fresh and  
processing: apples  
apricots  
cherries  
peaches  
pears

British Columbia Grape Marketing Board:

grapes for processing

Vegetables:

British Columbia Coast Vegetable Marketing Board:

fresh: beets  
cabbage  
carrots  
celery  
onions  
parsnips  
potatoes  
turnips (rutabagas)  
cucumbers (hothouse)  
tomatoes (hothouse)

processing: beans, bush  
corn, sweet  
peas, green  
potatoes

British Columbia Interior Vegetable Marketing Board:

fresh: asparagus	citron	squash
beets	eggplant	pumpkins
cabbage	onions	turnips
cauliflower	parsnips	vegetable marrow
carrots	pepper	zucchini
celery	potatoes	
cucumbers (field and hothouse)		
tomatoes (field and hothouse)		

British Columbia Mushroom Marketing Board:

mushrooms, fresh and processing

ALBERTAFruit:

No boards

Vegetables:Alberta Fresh Vegetable Marketing Board:

fresh: cabbage  
 carrots  
 corn, sweet  
 cucumbers  
 onions  
 parsnips  
 radishes  
 turnips (rutabagas)

Alberta Vegetable Growers Marketing Board:

processing: asparagus  
 beans, green and wax  
 beets, red  
 cabbage  
 carrots  
 cauliflower  
 corn, sweet  
 cucumbers  
 peas, green  
 pumpkins  
 tomatoes

SASKATCHEWAN

No boards

MANITOBAFruit:

No boards

Vegetables:Manitoba Root Crop Producers' Marketing Board:

fresh: carrots  
 onions  
 parsnips  
 turnips (rutabagas)  
 radishes  
 potatoes

Manitoba Vegetable Producers' Marketing Board:

fresh: asparagus	lettuce
beets	onions, green
Brussels sprouts	pepper
corn sweet	pumpkins
chinese cabbage	squash
red and green cabbage	tomatoes
celery	vegetable marrow
cucumbers	

ONTARIOFruit:Ontario Berry Growers' Marketing Board:

processing: strawberries  
 raspberries

Ontario Fresh Fruit Growers' Marketing Board:

fresh: peaches  
 pears  
 plums  
 prunes

Ontario Fresh Grape Growers' Marketing Board:

fresh: grapes

Ontario Grape Growers' Marketing Board:

processing: grapes

Ontario Tender Fruit Growers' Marketing Board:

processing: cherries  
              peaches  
              pears  
              plums and damsons  
              prunes

Vegetables:Ontario Asparagus Growers' Marketing Board:

processing: asparagus

Ontario Greenhouse Vegetable Producers' Marketing Board:

hothouse: cucumbers  
           tomatoes

Ontario Vegetable Growers' Marketing Board:

processing: beans, green, wax, and lima  
              beets, red  
              cabbage  
              carrots  
              corn, sweet  
              cauliflower  
              peas, green  
              pumpkins  
              squash  
              tomatoes

QUEBECFruit:

Fédération des Producteurs de Bleuets du Saguenay - Lac St-Jean:

fresh and  
processing: blueberries

Vegetables:

Office des Producteurs de Tomates du Québec:

fresh and  
processing: tomatoes

NEW BRUNSWICKFruit:

New Brunswick Apple Marketing Board:

all apples, fresh and processing

Vegetables:

No boards

NOVA SCOTIA

No boards

PRINCE EDWARD ISLANDFruit:

No boards

Vegetables:

Prince Edward Island Vegetable Commodity Marketing Board:

fresh: turnips

NEWFOUNDLAND:

No boards

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Source: Study by Peter L. Arcus, Dept. of Agricultural Economics,  
University of British Columbia, Dept. of Agriculture and  
Tariff Board.





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Vegetables: Average Acreage and Per Cent Change in Acreage,  
by Commodity, Average 1961-65, 1966-70 and 1971-75

	Average Acreage			% Change in Acreage	
	1961-65	1966-70	1971-75	1966-70	1961-65
				to 1971-75	to 1971-75
A. Potatoes	290,360	309,360	263,220	-14.9	- 9.3
B. Peas	54,556	53,272	56,432	+ 5.9	+ 3.4
Sweet Corn	54,628	59,956	69,697	+16.2	+27.6
Tomatoes	33,217	29,916	27,901	- 6.7	-16.0
Snap Beans	22,188	25,304	23,220	- 8.2	+ 4.7
Sub-Total B	164,589	168,448	177,250	+ 5.2	+ 7.7
C. Carrots	12,876	12,980	15,519	+19.6	+20.5
Celery	1,178	1,128	1,113	- 1.3	- 5.5
Lettuce	4,926	4,920	5,148	+ 4.6	+ 4.5
Onions	9,074	8,818	8,559	- 2.9	- 5.7
Sub-Total C	28,054	27,846	30,339	+ 9.0	+ 8.2
D. Asparagus	3,936	3,250	3,612	+11.1	- 8.2
Beets	2,710	2,244	2,358	+ 5.1	-13.0
Cabbage	7,238	7,654	8,990	+17.5	+24.2
Cauliflower	2,952	3,320	3,418	+ 3.0	+15.8
Cucumbers	9,688	10,004	9,305	- 7.0	- 3.9
Parsnips	684	570	510	-10.5	-25.4
Spinach	1,064	866	863	- 0.3	-18.9
Sub-Total D	28,272	27,908	29,056	+ 4.1	+ 2.8
E. Turnips	16,780	11,804	8,621	-27.0	-48.6
Sub-Total D & E	45,052	39,712	37,677	- 5.1	-16.4
Total A,B,C,D & E	528,055	545,366	508,486	- 6.8	- 3.7
Total B,C,D & E	237,695	236,006	245,266	+ 3.9	+ 3.2
Total C,D & E	73,106	67,558	68,016	+ 0.7	- 7.0
Total C & D	56,326	55,754	59,395	+ 6.5	+11.4

Source: Derived from Statistics Canada, Agriculture Canada and  
Provincial Sources.

Vegetables: Percentage Distribution of Average Acreage by Commodity, Average 1961-65, 1966-70 and 1971-75

	% Distribution of Total Excluding Potatoes			% Distribution of Total Excluding Processing (a) Vegetables			% Distribution of Total Excluding Processing (a) Vegetables and Turnips			
	1961-65		1966-70	1961-65		1966-70	1961-65		1966-70	1971-75
	-			per cent -						
A. Potatoes	55.0	56.7	51.8							
B. Peas	10.3	9.8	11.1	23.0	22.6	23.0				
Sweet Corn	10.3	11.0	13.7	23.0	25.4	28.4				
Tomatoes	6.3	5.5	5.5	14.0	12.7	11.4				
Snap Beans	4.2	4.6	4.6	9.3	10.7	9.5				
Sub-Total B	31.2	30.9	34.9	69.2	71.4	72.3				
C. Carrots	2.4	2.4	3.1	5.4	5.5	6.3	17.6	19.2	22.8	23.3
Celery	0.2	0.2	0.2	0.5	0.5	0.5	1.6	1.7	1.6	2.0
Lettuce	0.9	0.9	1.0	2.1	2.1	2.1	6.7	7.3	7.6	8.7
Onions	1.7	1.6	1.7	3.8	3.7	3.5	12.4	13.1	12.6	15.8
Sub-Total C	5.3	5.1	6.0	11.8	11.8	12.4	38.4	41.2	44.6	50.0
D. Asparagus	0.7	0.6	0.7	1.7	1.4	1.5	5.4	4.8	5.3	5.8
Beets	0.5	0.4	0.5	1.1	1.0	1.0	3.7	3.3	3.5	4.0
Cabbage	1.4	1.4	1.8	3.0	3.2	3.7	9.9	11.3	13.2	13.7
Cauliflower	0.6	0.6	0.7	1.2	1.4	1.4	4.0	4.9	5.0	5.2
Cucumbers	1.8	1.8	1.8	4.1	4.2	3.8	13.3	14.8	13.7	17.2
Parsnips	0.1	0.1	0.1	0.3	0.2	0.2	0.9	0.8	0.7	1.2
Spinach	0.2	0.2	0.2	0.4	0.4	0.4	1.5	1.3	1.3	1.9
Sub-Total D	5.4	5.1	5.7	11.9	11.8	11.8	38.7	41.3	42.7	50.2
D. Turnips	3.2	2.2	1.7	7.1	5.0	3.5	23.0	17.5	12.7	
Sub-Total D & E	8.5	7.3	7.4	19.0	16.8	15.4	61.6	58.8	55.4	
Total A,B,C,D & E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total B,C,D & E										
Total C,D & E										
Total C & D										

(a) Vegetables mainly used for processing.

Source: Derived from Appendix Table 1.

Vegetables: Average Acreage, by Commodity, by Region, Average 1961-65 and 1971-75

	1961-65				1971-75			
	Maritimes	Quebec	Ontario	Prairies	B.C. - acres -	Maritimes	Quebec	Ontario
A. Potatoes	102,140	73,240	51,080	53,440	10,460	104,540	49,200	42,940
B. Peas	7,026	15,756	18,824	7,318	5,632	8,967	15,274	23,790
Sweet Corn	708	18,450	25,008	6,620	3,842	872	18,832	42,902
Tomatoes	356	4,984	27,010	132	734	230	3,878	23,493
Snap Beans	3,044	13,672	4,052	..	1,420	3,311	12,792	5,443
Sub-Total B	11,134	52,862	74,894	14,070	11,628	13,380	50,776	95,628
C. Carrots	560	7,132	3,846	830	508	1,158	9,108	3,846
Celery	-	402	558	74	144	-	444	472
Lettuce	160	2,446	1,734	104	482	178	2,936	1,391
Onions	-	2,496	4,684	1,342	552	-	2,828	4,326
Sub-Total C	720	12,476	10,822	2,350	1,686	1,336	15,316	10,035
D. Asparagus	-	254	3,160	78	444	-	258	2,650
Beets	158	1,140	1,214	60	138	272	1,024	925
Cabbage	456	2,502	2,896	882	502	596	3,952	2,928
Cauliflower	86	826	1,366	188	486	206	918	1,435
Cucumbers	466	2,484	5,974	398	366	192	2,928	5,679
Parsnips	114	..	532	..	38	166	..	270
Spinach	-	176	760	-	128	-	164	52
Sub-Total D	1,280	7,382	15,902	1,606	2,102	1,432	9,244	14,523
E. Turnips	6,780	1,960	7,110	638	292	1,730	2,174	3,852
Sub-Total D & E	8,060	9,342	23,012	2,244	2,394	3,162	11,418	18,375
Total A,B,C,D & E	122,054	147,920	159,808	72,104	26,168	122,418	126,710	166,978
Total B,C,D & E	19,914	74,680	108,728	18,664	15,708	17,878	77,510	124,038
Total C,D & E	8,780	21,818	33,834	4,594	4,080	4,498	26,734	28,410
Total C & D	2,000	19,858	26,724	3,856	3,788	2,768	24,560	24,558

Source: Derived from Statistics Canada, Agriculture Canada and Provincial Sources.

Vegetables: Inter-Regional and Intra-Regional Distribution of Average Acreage, by Commodity, Average 1971-75

	Intra-Regional Distribution						Inter-Regional Distribution					
	Maritimes			Ontario			Quebec			Maritimes		
	Canada	Maritimes	Quebec	Ontario	Prairies	B.C.	Canada	Maritimes	Quebec	Ontario	Prairies	B.C.
	- per cent -											
A. Potatoes	51.8	85.4	38.8	25.7	83.6	41.9	100.0	39.7	18.7	16.3	21.2	4.1
B. Peas	11.1	7.3	12.1	14.2	5.8	17.7	100.0	15.9	27.1	42.2	6.9	8.0
Sweet corn	13.7	0.7	14.9	25.7	5.1	14.4	100.0	1.3	27.0	61.6	4.9	5.3
Tomatoes	5.5	0.2	3.1	14.1	0.1	0.9	100.0	0.8	13.9	84.2	0.2	0.8
Snap Beans	4.6	2.7	10.1	3.3	..	6.5	100.0	14.3	55.1	23.4	..	7.2
Sub-Total B	34.9	10.9	40.1	57.3	11.0	39.5	100.0	7.5	28.6	54.0	4.1	5.7
C. Carrots	3.1	0.9	7.2	2.3	1.4	1.8	100.0	7.5	58.7	24.8	6.1	3.0
Celery	0.2	-	0.4	0.3	0.1	0.6	100.0	-	39.9	42.4	5.0	12.7
Lettuce	1.0	0.1	2.3	0.8	*	2.4	100.0	3.5	57.0	27.0	0.4	12.1
Onions	1.7	-	2.2	2.6	1.2	2.4	100.0	-	33.0	50.5	9.2	7.2
Sub-Total C	6.0	1.1	12.1	6.0	2.7	7.2	100.0	4.4	50.5	33.1	6.0	6.1
D. Asparagus	0.7	-	0.2	1.6	0.2	2.3	100.0	-	7.1	73.4	3.4	16.1
Beets	0.5	0.2	0.8	0.6	0.1	0.4	100.0	11.5	43.4	39.2	1.9	3.9
Cabbage	1.8	0.5	3.1	1.8	1.0	3.3	100.0	6.6	44.0	32.6	7.6	9.3
Cauliflower	0.7	0.2	0.7	0.9	0.2	2.8	100.0	6.0	26.9	42.0	4.2	20.9
Cucumbers	1.8	0.2	2.3	3.4	0.3	1.1	100.0	2.1	31.5	61.0	2.4	3.0
Parsnips	0.1	0.1	..	0.2	0.1	0.1	100.0	32.5	..	52.9	10.2	4.3
Spinach	0.2	-	0.1	0.4	-	0.3	100.0	-	19.0	73.7	-	7.4
Sub-Total D	5.7	1.2	7.3	8.7	1.9	10.1	100.0	4.9	31.8	50.0	4.4	8.9
E. Turnips	1.7	1.4	1.7	2.3	0.8	1.3	100.0	20.1	25.2	44.7	6.3	3.8
Sub-Total D & E	7.4	2.6	9.0	11.0	2.7	11.4	100.0	8.4	30.3	48.8	4.8	7.7
Total A,B,C,D & E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	24.1	24.9	32.8	13.1	5.0
Total B,C,D & E	48.2	14.6	61.2	74.3	16.4	58.1	100.0	7.3	31.6	50.6	4.5	6.1
Total C,D & E	13.4	3.7	21.1	17.0	5.4	18.6	100.0	6.6	39.3	41.8	5.3	7.0
Total C & D	11.7	2.3	19.4	14.7	4.6	17.3	100.0	4.7	41.4	41.3	5.2	7.5

Source: Derived from Appendix Tables 1 and 3.

Appendix Table 5

Vegetables: Percentage Change in Average Acreage, by  
Commodity, by Region, 1961-65 to 1971-75

	<u>Canada</u>	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>
	- per cent -					
A. Potatoes	- 9.3	+ 2.3	-32.8	-15.9	+ 4.5	+ 2.5
B. Peas	+ 3.4	+ 27.6	- 3.1	+26.4	-47.0	-19.8
Sweet Corn	+27.6	+ 23.2	+ 2.1	+71.6	-48.7	- 3.9
Tomatoes	-16.0	- 35.4	-22.2	-13.0	-50.8	-67.8
Snap Beans	+ 4.7	+ 8.8	- 6.4	+34.3	..	+18.0
Sub-Total B	+ 7.7	+ 20.2	- 3.9	+27.7	-47.8	-13.0
C. Carrots	+20.5	+106.8	+27.7	-	+13.9	- 9.3
Celery	- 5.5	-	+10.4	-15.4	-24.3	- 2.1
Lettuce	+ 4.5	+ 11.3	+20.0	-19.8	-78.8	+28.8
Onions	- 5.7	-	+13.3	- 7.6	-41.6	+12.3
Sub-Total C	+ 8.1	+ 85.6	+22.8	- 7.3	-23.1	+ 9.3
D. Asparagus	- 8.2	-	+ 1.6	-16.1	+55.1	+31.3
Beets	-13.0	+ 72.2	-10.2	-23.8	-26.7	-32.6
Cabbage	+24.2	+ 30.7	+58.0	+ 1.1	-22.9	+66.1
Cauliflower	+15.8	+139.5	+11.1	+ 5.1	-22.9	+47.1
Cucumbers	- 3.9	- 58.8	+17.9	- 4.9	-43.0	-24.0
Parsnips	-25.4	+ 45.6	..	-49.2	..	-42.1
Spinach	-18.9	-	- 6.8	-16.3	-	-50.0
Sub-Total D	+ 2.8	+ 11.9	+25.2	- 8.7	-21.0	+23.2
E. Turnips	-48.6	- 74.5	+10.9	-45.8	-15.2	+11.3
Sub-Total D & E	-11.9	- 60.8	+22.2	-20.2	-19.3	+21.7
Total A,B,C,D & E	- 3.7	+ 0.3	-14.3	+ 4.5	- 7.4	- 2.2
Total B,C,D & E	+ 3.2	- 10.2	+ 3.8	+14.1	-41.3	- 5.3
Total C,D & E	- 7.0	- 48.8	+22.5	-16.0	-21.3	+16.6
Total C & D	+ 5.4	+ 38.4	+23.7	- 8.1	-22.2	+17.0

Source: Derived from Appendix Tables 1 and 3.

Vegetables: Number of "Census Farm" Vegetable Growers,  
and Acreage, by Commodity, 1971

	Number of Growers (a)	Acreage	Acreage per Grower
A. Potatoes	12,447	269,619	21.7
B. Peas	2,303	48,696	21.1
Sweet Corn	5,610	69,579	12.4
Tomatoes	5,797	28,215	4.9
Snap Beans	2,912	24,766	8.5
Sub-Total B	(16,622)	171,256	10.3
C. Carrots	3,072	13,167	4.3
Celery	403	1,170	2.9
Lettuce	1,766	5,247	3.0
Onions	2,080	8,988	4.3
Sub-Total C	( 7,321)	28,572	3.9
D. Asparagus	950	4,215	4.4
Beets	2,191	2,555	1.2
Cabbage	3,350	9,341	2.8
Cauliflower	1,408	3,872	2.8
Cucumbers	5,660	9,948	1.8
Parsnips	..	..	..
Spinach	312	645	2.1
Sub-Total D	(13,871)	30,576	2.2
E. Turnips	2,613	9,580	3.7
Sub-Total D & E	(16,484)	40,156	2.4
Total B,C,D & E	16,120	254,606	15.8

(a) Figures in brackets are for use in calculating average acreage only.  
The number of growers are not additive because one grower may be  
producing more than one type of vegetable.

Source: Census of Canada, 1971.



Vegetables: Average Yield per Acre and Per Cent Change in Yield, by Commodity, Average  
1961-65, 1966-70 and 1971-75

	Average Yield				% Change in Yield			
	1961-65		1966-70		1961-65		1966-70	
	- pounds per acre -		- pounds per acre -		to		to	
	1961-65	1966-70	1961-65	1966-70	1961-65	1966-70	1961-65	1966-70
A. Potatoes	15,854	16,889	18,526		+ 6.5	+ 9.7	+16.9	
B. Peas	2,341	2,524	2,566		+ 7.8	+ 1.7	+ 9.6	
Sweet Corn	6,920	7,482	7,480		+ 8.1	- 0.1	+ 8.1	
Tomatoes	24,194	24,706	28,873		+ 2.1	+16.9	+19.3	
Snap Beans	3,569	4,020	4,030		+12.6	+ 0.3	+12.9	
Sub-Total B	8,437	8,453	8,831		+ 0.2	+ 4.5	+ 4.7	
C. Carrots	24,054	26,511	24,253		+10.2	- 8.5	+ 0.9	
Celery	37,067	36,856	43,824		- 0.6	+18.9	+18.2	
Lettuce	11,686	11,413	13,257		- 2.3	+16.2	+13.4	
Onions	24,658	24,521	23,874		- 0.5	- 2.6	- 3.2	
Sub-Total C	22,624	23,632	22,998		+ 4.5	- 2.7	+ 1.7	
D. Asparagus	1,635	1,620	1,716		- 0.9	+ 5.9	+ 5.0	
Beets	18,444	17,889	17,084		- 3.0	- 4.5	- 7.4	
Cabbage	18,985	20,111	19,521		+ 5.9	- 2.9	+ 2.8	
Cauliflower	11,232	10,946	10,463		- 2.5	- 4.4	- 6.8	
Cucumbers	7,269	12,074	13,979		+66.1	+15.8	+92.3	
Parsnips	18,500	18,569	14,731		+ 0.4	-20.7	-20.4	
Spinach	10,689	6,490	6,614		-20.6	-22.1	-38.1	
Sub-Total D	11,441	13,472	13,802		+17.8	+ 2.5	+20.6	
E. Turnips	23,894	23,905	23,543		- 0.1	- 1.5	- 1.5	
Sub-Total D & E	16,034	16,573	16,031		+ 3.8	- 3.3	- 0.1	
Total A,B,C,D & E	13,917	14,605	15,229		+ 5.0	+ 4.3	+ 9.4	
Total B,C,D & E	11,551	11,610	11,689		+ 0.5	+ 0.7	+ 1.2	
Total C,D & E	18,563	19,423	19,139		+ 4.6	- 1.5	+ 3.1	
Total C & D	17,930	18,546	18,500		+ 3.4	- 0.2	+ 3.2	

Source: Derived from Statistics Canada

Vegetables: Average Yield per Acre, by Commodity, by Region, Average 1961-65 and 1971-75

	1961-65					1971-75				
	Maritimes	Quebec	Ontario	Prairies	B.C.	Maritimes	Quebec	Ontario	Prairies	B.C.
					pounds per acre -					
A. Potatoes	19,536	12,470	19,232	10,272	18,893	21,666	13,921	19,214	15,296	23,103
B. Peas	2,544	1,933	2,688	1,315	3,406	2,436	1,704	2,758	3,139	4,239
Sweet Corn	4,583	5,169	8,745	4,825	7,486	3,604	5,494	8,177	7,822	10,105
Tomatoes	11,320	8,300	27,454	20,508	19,083	13,274	6,605	32,807	11,200	23,127
Snap Beans	3,058	3,030	4,523	..	7,118	3,892	3,721	4,195	..	6,119
Sub-Total B	3,095	3,947	13,741	3,147	6,197	3,059	3,992	12,653	5,377	7,130
C. Carrots	15,400	19,771	34,572	19,927	20,839	23,277	15,683	44,616	26,072	22,438
Celery	-	23,517	50,599	27,838	27,201	-	27,212	63,932	35,071	32,312
Lettuce	7,450	8,640	15,286	8,904	16,195	6,371	8,926	16,330	3,318	29,180
Onions	-	20,440	30,506	12,634	23,342	-	22,356	26,990	16,653	27,352
Sub-Total C	13,633	17,843	30,548	15,523	20,874	21,025	15,585	34,006	21,987	27,118
D. Asparagus	-	2,051	1,545	1,628	2,036	-	2,000	1,752	1,496	1,477
Beets	8,975	13,666	24,481	9,550	19,507	9,750	10,854	26,764	13,000	12,796
Cabbage	17,467	13,494	25,785	14,422	16,522	17,403	13,401	30,104	17,247	14,731
Cauliflower	9,116	7,483	14,137	7,628	11,210	7,301	6,380	15,517	7,903	6,978
Cucumbers	7,470	5,612	7,799	5,291	11,751	9,063	10,052	16,537	7,123	12,151
Farsnips	8,702	..	21,060	..	12,079	7,428	..	20,059	12,173	10,500
Spinach	-	3,938	12,471	-	9,391	-	3,232	7,541	-	5,984
Sub-Total D	11,438	9,574	12,317	10,560	11,085	12,221	10,862	16,797	12,511	9,007
E. Turnips	23,835	17,573	25,749	25,077	19,955	19,792	15,128	30,357	23,455	19,117
Sub-Total D & E	21,866	11,252	16,467	14,688	12,167	16,363	11,674	19,639	15,782	10,134
Total A,B,C,D & E	17,874	9,800	17,027	9,190	12,764	19,488	9,941	16,392	14,399	15,600
Total B,C,D & E	11,073	7,182	15,991	6,093	8,682	6,755	7,415	15,416	9,833	10,194
Total C,D & E	21,191	15,021	20,971	15,115	15,765	17,748	13,914	24,714	18,882	16,714
Total C & D	12,228	14,769	19,700	13,509	15,442	16,470	13,807	23,829	18,078	16,538

Source: Derived from Statistics Canada, Agriculture Canada and Provincial Sources.

**Vegetables: Average Production and Per Cent Change in Production,  
by Commodity, Average 1961-65, 1966-70 and 1971-75**

	Average Production			% Change in Production	
	1961-65	1966-70	1971-75	1966-70 to 1971-75	1961-65 to 1971-75
	- thousand pounds -			- per cent -	
A. Potatoes	4,603,320	5,224,900	4,876,360	- 6.7	+ 5.9
B. Peas	127,734	134,458	144,832	+ 7.7	+13.4
Sweet Corn	378,013	448,604	521,307	+16.2	+37.9
Tomatoes	803,636	739,117	805,577	+ 9.0	+ 0.3
Snap Beans	79,178	101,734	93,577	- 8.0	+18.2
Sub-Total B	1,388,561	1,423,913	1,565,293	+ 9.9	+12.7
C. Carrots	309,719	344,113	376,376	+ 9.4	+21.5
Celery	43,665	41,574	48,776	+17.3	+11.7
Lettuce	57,564	56,151	68,249	+21.6	+18.6
Onions	223,748	216,223	204,339	- 5.5	- 8.7
Sub-Total C	634,696	658,061	697,740	+ 6.0	+ 9.9
D. Asparagus	6,435	5,266	6,199	+17.7	- 3.7
Beets	49,982	40,142	40,284	+ 0.4	-19.4
Cabbage	137,415	153,930	175,491	+14.0	+27.7
Cauliflower	33,158	36,340	35,764	- 1.6	+ 7.9
Cucumbers	70,421	120,791	130,079	+ 7.7	+84.7
Parsnips	14,670	12,158	9,947	-18.2	-32.2
Spinach	11,373	7,352	5,708	-22.4	-49.8
Sub-Total D	323,454	375,979	403,472	+ 7.3	+24.7
E. Turnips	400,942	282,177	202,963	-28.1	-49.4
Sub-Total D & E	724,396	658,156	606,435	- 7.8	-16.3
Total A,B,C,D & E	7,350,973	7,965,030	7,745,828	- 2.7	+ 5.4
Total B,C,D & E	2,747,653	2,740,130	2,869,468	+ 4.7	+ 4.4
Total C,D & E	1,359,092	1,316,217	1,304,175	- 0.1	- 4.0
Total C & D	958,150	1,034,040	1,101,212	+ 6.5	+14.9

Source: Derived from Statistics Canada, Agriculture Canada and Provincial Sources.

Vegetables: Percentage Distribution of Average Production by Commodity,  
Average 1961-65, 1966-70 and 1971-75

	% Distribution of Total			% Distribution of Total			% Distribution of Total		
	Excluding Processing (a)			Excluding Potatoes			Vegetables		
	1961-65	1966-70	1971-75	1961-65	1966-70	1971-75	1961-65	1966-70	1971-75
	- per cent -								
A. Potatoes	62.6	65.6	63.0						
B. Peas	1.7	1.7	1.9	4.6	4.9	5.0			
Sweet Corn	5.1	5.6	6.7	13.8	16.4	18.2			
Tomatoes	10.9	9.3	10.4	29.2	27.0	28.1			
Snap Beans	1.1	1.3	1.2	2.9	3.7	3.3			
Sub-Total B	18.9	17.9	20.2	50.5	52.0	54.6			
C. Carrots	4.2	4.3	4.9	11.3	12.6	13.1	22.8	26.1	28.9
Celery	0.6	0.5	0.6	1.6	1.5	1.7	3.2	3.2	3.7
Lettuce	0.8	0.7	0.9	2.1	2.0	2.4	4.2	4.3	5.2
Onions	3.0	2.7	2.6	8.1	7.9	7.1	16.5	16.4	15.7
Sub-Total C	8.6	8.3	9.0	23.1	24.0	24.3	46.7	50.0	53.5
D. Asparagus	0.1	0.1	0.1	0.2	0.2	0.2	0.5	0.4	0.5
Beets	0.7	0.5	0.5	1.8	1.5	1.4	3.7	3.0	3.1
Cabbage	1.9	1.9	2.3	5.0	5.6	6.1	10.1	11.7	13.5
Cauliflower	0.5	0.5	0.5	1.2	1.3	1.2	2.4	2.8	2.7
Cucumbers	1.0	1.5	1.7	2.6	4.4	4.5	5.2	9.2	10.0
Parsnips	0.2	0.2	0.1	0.5	0.4	0.3	1.1	0.9	0.8
Spinach	0.2	0.1	0.1	0.4	0.3	0.2	0.8	0.6	0.4
Sub-Total D	4.4	4.7	5.2	11.8	13.7	14.1	23.8	28.6	30.9
E. Turnips	5.5	3.5	2.6	14.6	10.3	7.1	29.5	21.4	15.6
Sub-Total D & E	9.9	8.3	7.8	26.4	24.0	21.1	53.3	50.0	46.5
Total A,B,C,D & E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total B,C,D & E									
Total C,D & E									

(a) Vegetables mainly used for processing.

Source: Derived from Appendix Table 9.

Vegetables: Average Production, by Commodity, by Region, Average 1961-65 and 1971-75

	1961-65				1971-75			
	Maritimes	Quebec	Ontario	Prairies	B.C. - thousand pounds -	Maritimes	Quebec	Ontario
A. Potatoes	1,961,120	913,280	982,360	548,940	197,620	2,264,960	684,900	825,040
Peas	17,873	30,451	50,605	9,624	19,181	21,847	26,021	65,624
Sweet Corn	3,245	95,375	218,687	31,943	28,763	3,143	103,463	350,808
Tomatoes	4,030	41,366	741,526	2,707	14,007	3,053	25,613	770,725
Snap Beans	9,310	41,432	18,329	..	10,107	12,886	47,605	22,836
Sub-Total B	34,458	208,624	1,029,147	44,274	72,058	40,929	202,702	1,209,993
C. Carrots	8,624	141,004	132,965	16,539	10,586	26,955	142,844	171,595
Celery	-	9,454	28,234	2,060	3,917	-	12,082	30,176
Lettuce	1,192	21,134	26,506	926	7,806	1,134	26,206	22,715
Onions	-	51,018	142,890	16,955	12,885	-	57,566	116,760
Sub-Total C	9,816	222,610	330,595	36,480	35,194	28,089	238,698	341,246
D. Asparagus	-	521	4,883	127	904	-	516	4,642
Beets	1,418	15,579	29,720	573	2,692	2,652	11,114	24,757
Cabbage	7,965	33,761	74,674	12,720	8,294	10,372	52,961	88,145
Cauliflower	784	6,181	19,311	1,434	5,448	1,504	5,857	22,267
Cucumbers	3,481	13,941	46,592	2,106	4,301	1,740	29,432	93,913
Parsnips	992	2,015	11,204	..	459	1,233	2,433	5,416
Spinach	-	693	9,478	-	1,202	-	530	4,796
Sub-Total D	14,640	72,691	195,862	16,960	23,300	17,501	102,843	243,936
E. Turnips	161,600	34,444	183,072	15,999	5,827	34,240	32,888	116,934
Sub-Total D & E	176,240	107,135	378,934	32,959	29,127	51,741	135,731	360,870
Total A,B,C,D & E	2,181,634	1,451,649	2,721,036	662,653	333,999	2,385,719	1,262,031	2,737,149
Total B,C,D & E	220,514	538,369	1,738,676	113,713	136,379	120,759	577,131	1,912,109
Total C,D & E	186,056	329,745	709,529	69,439	64,321	79,830	374,429	702,116
Total C & D	24,456	295,301	526,457	53,440	58,494	45,590	341,541	585,182

Source: Derived from Statistics Canada, Agriculture Canada and Provincial Sources.

Vegetables: Average Production by End-Use, by Commodity,  
Average 1961-65 and 1971-75

	Production for Fresh market		Production for Processing	
	1961-65	1971-75	1961-65	1971-75
	- thousand pounds -			
A. Potatoes <sup>(a)</sup>	3,201,639	2,667,182	598,488	1,516,841
B. Peas	306	205	127,428	144,627
Sweet Corn	68,950	68,299	309,063	453,008
Tomatoes	144,084	72,081	659,552	733,496
Snap Beans	13,873	12,128	65,305	81,449
Sub-Total B	227,213	152,713	1,161,348	1,412,580
C. Carrots	255,422	299,846	54,297	76,530
Celery	37,532	40,613	6,133	8,163
Lettuce	57,564	68,249	-	-
Onions	219,625	201,864	4,123	2,475
Sub-Total C	570,143	610,572	64,553	87,168
D. Asparagus	2,341	2,570	4,094	3,629
Beets	26,256	10,171	23,726	30,113
Cabbage	125,105	155,491	12,310	20,000
Cauliflower	28,447	29,020	4,711	6,744
Cucumbers	20,521	25,839	49,900	104,240
Parsnips	14,670	9,947	-	-
Spinach	8,310	3,801	3,063	1,907
Sub-Total D	225,650	236,839	97,804	166,633
E. Turnips	399,582	200,963	1,360	2,000
Sub-Total D & E	625,232	437,802	99,164	168,630
Total A,B,C,D & E	4,624,227	3,868,269	1,923,553	3,185,219
Total B,C,D & E	1,422,588	1,201,087	1,325,065	1,668,378
Total C,D & E	1,195,375	1,048,374	163,717	255,798
Total C & D	795,793	847,411	162,357	253,801

(a) Excludes seed potatoes.

Source: Derived from Statistics Canada, Agriculture Canada and  
Provincial Sources.



Vegetables: Farm Value by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75	% Change 1966-70 to 1971-75	% Change 1961-65 to 1971-75
			- thousand dollars -						- percent -	
A. Potatoes	93,949	92,164	83,318	149,443	246,636	158,407	249,242	177,409	+ 92.5	+ 88.8
B. Peas	5,676	6,473	5,932	5,747	7,952	14,719	18,211	10,512	+ 62.4	+ 85.2
Sweet Corn	6,576	8,241	9,903	9,821	10,190	16,047	21,276	13,447	+ 63.2	+104.5
Tomatoes	18,923	21,463	23,299	21,761	27,493	32,493	42,468	29,503	+ 37.5	+ 55.9
Snap Beans	3,700	4,897	4,726	4,382	5,844	6,681	7,696	5,866	+ 19.8	+ 58.5
Sub-Total B	34,875	41,074	43,860	41,711	51,479	69,940	89,651	59,328	+ 44.4	+ 70.1
C. Carrots	6,337	7,272	8,448	9,394	9,521	13,071	12,798	10,646	+ 46.4	+ 68.0
Celery	1,167	1,440	1,591	1,827	2,653	2,488	3,823	2,476	+ 71.9	+112.2
Lettuce	2,577	3,282	3,991	3,517	5,283	5,777	6,145	4,943	+ 50.6	+ 91.8
Onions	5,575	6,628	6,590	12,756	11,014	9,029	16,036	11,085	+ 67.2	+ 98.8
Sub-Total C	15,656	18,622	20,620	27,494	28,471	30,365	38,802	29,150	+ 56.5	+ 86.2
D. Asparagus	1,293	1,328	1,721	1,897	2,322	2,502	2,810	2,250	+ 69.4	+ 74.0
Beets	1,070	920	1,012	1,024	1,278	1,589	1,644	1,309	+ 42.3	+ 22.3
Cabbage	2,906	4,190	4,851	6,030	7,880	6,949	9,179	6,978	+ 66.5	+140.1
Cauliflower	1,674	2,322	2,609	2,864	3,182	3,876	5,245	3,555	+ 53.1	+112.4
Cucumbers	2,685	5,691	5,773	5,904	6,233	8,230	10,876	7,403	+ 30.1	+175.7
Parsnips	495	455	596	555	486	543	647	565	+ 24.2	+ 14.1
Spinach	519	391	410	677	392	657	535	534	+ 36.6	+ 2.9
Sub-Total D	10,642	15,297	16,972	18,951	21,773	24,346	30,936	22,594	+ 47.7	+112.3
E. Turnips	5,266	5,466	3,926	6,452	7,249	7,966	8,091	6,737	+ 23.3	+ 27.9
Sub-Total D & E	15,908	20,763	20,898	25,403	29,022	32,312	39,027	29,331	+ 41.3	+ 84.4
Total A,B,C,D & E	160,388	172,623	168,696	244,051	355,608	291,024	416,722	295,218	+ 71.0	+ 84.1
Total B,C,D & E	66,439	80,459	85,378	94,608	108,972	132,617	167,480	117,809	+ 46.4	+ 77.3
Total C,D & E	31,564	39,385	41,518	52,897	57,493	62,677	77,829	58,481	+ 48.5	+ 85.3
Total C & D	26,298	33,919	37,592	46,445	50,244	54,711	69,738	51,744	+ 52.6	+ 96.8

Source: Derived from Statistics Canada and Provincial Sources.

Vegetables: Percentage Distribution of Farm Value, by Commodity, Average 1961-65, 1966-70 and 1971-75

	% Distribution of Total			% Distribution of Total			% Distribution of Total Ex- cluding Processing Vegetables (a)		
	Excluding Potatoes			Excluding Potatoes			cluding Processing Vegetables (a)		
	1961-65	1966-70	1971-75	1961-65	1966-70	1971-75	1961-65	1966-70	1971-75
A. Potatoes	58.6	53.4	60.1	- per cent -					
B. Peas	3.5	3.7	3.6	8.5	8.0	8.9			
Sweet Corn	4.1	4.8	4.6	9.9	10.2	11.4			
Tomatoes	11.8	12.4	10.0	28.5	26.7	25.0			
Snap Beans	2.3	2.8	2.0	5.6	6.1	5.0			
Sub-Total B	21.7	23.8	20.1	52.5	51.0	50.4			
C. Carrots	4.0	4.2	3.6	9.5	9.0	9.0	20.1	18.5	18.2
Celery	0.7	0.8	0.8	1.8	1.8	2.1	3.7	3.7	4.2
Lettuce	1.6	1.9	1.7	3.9	4.1	4.2	8.2	8.3	8.5
Onions	3.5	3.8	3.8	8.4	8.2	9.4	17.7	16.8	19.0
Sub-Total C	9.8	10.8	9.9	23.6	23.1	24.7	49.6	47.3	49.8
D. Asparagus	0.8	0.8	0.8	1.9	1.7	1.9	4.1	3.4	3.8
Beets	0.7	0.5	0.4	1.6	1.1	1.1	3.4	2.3	2.2
Cabbage	1.8	2.4	2.4	4.4	5.2	5.9	9.2	10.6	11.9
Cauliflower	1.0	1.3	1.2	2.5	2.9	3.0	5.3	5.9	6.1
Cucumbers	1.7	3.3	2.5	4.0	7.1	6.3	8.5	14.4	12.7
Parsnips	0.3	0.3	0.2	0.7	0.6	0.5	1.6	1.2	1.0
Spinach	0.3	0.2	0.2	0.8	0.5	0.5	1.6	1.0	0.9
Sub-Total D	6.6	8.9	7.7	16.0	19.0	19.2	33.7	38.8	38.6
E. Turnips	3.3	3.2	2.3	7.9	6.8	5.7	16.7	13.9	11.5
Sub-Total D & E	9.9	12.0	9.9	23.9	25.8	24.9	50.4	52.7	50.2
Total A,B,C,D & E	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total B,C,D & E									
Total C,D & E									

(a) Vegetables mainly used for processing.

Source: Derived from Appendix Table 13.

Vegetables: Farm Value, by Commodity, by Region, 1961-65 and 1971-75

	Average 1961-65				Average 1971-75						
	Maritimes	Quebec	Ontario	Prairies	B.C.	Maritimes	Quebec	Ontario	Prairies	B.C.	
	- thousand dollars -										
A.	Potatoes	35,611	17,850	21,689	12,854	5,945	75,799	27,423	34,545	28,037	11,601
B.	Peas	..	1,329	2,573	..	914	1,343	1,747	5,098	842	1,484
	Sweet Corn	183	1,781	3,475	508	629	281	2,813	8,538	734	1,081
	Tomatoes	307	1,255	16,602	173	585	412	1,745	26,743	109	494
	Snap Beans	442	1,541	1,180	..	536	806	2,256	2,117	..	687
	Sub-Total B	932	5,906	23,830	681	2,664	2,842	8,561	42,496	1,685	3,746
C.	Carrots	357	2,636	2,424	472	448	693	3,685	4,217	1,312	740
	Celery	-	254	658	80	175	-	504	1,451	154	368
	Lettuce	93	776	1,306	48	354	192	1,505	2,056	7	1,184
	Onions	-	1,347	3,120	573	535	-	2,487	6,550	846	1,202
	Sub-Total C	450	5,013	7,508	1,173	1,512	885	8,181	14,274	2,319	3,494
D.	Asparagus	-	110	1,012	19	152	-	151	1,767	57	275
	Beets	81	270	605	14	100	152	281	736	33	108
	Cabbage	267	653	1,338	294	354	580	1,698	3,176	604	920
	Cauliflower	46	285	960	72	311	157	527	2,129	156	588
	Cucumbers	196	522	1,647	110	211	131	1,389	5,417	187	280
	Parsnips	60	..	409	-	26	159	..	302	77	28
	Spinach	-	35	434	-	50	-	61	417	-	57
	Sub-Total D	650	1,875	6,405	509	1,204	1,179	4,107	13,944	1,114	2,256
E.	Turnips	1,644	658	2,492	316	156	810	1,208	3,658	645	417
	Sub-Total D & E	2,294	2,533	8,897	825	1,360	1,989	5,315	17,602	1,759	2,673
	Total A,B,C,D & E	39,287	31,302	61,924	15,533	11,481	81,515	49,480	108,917	33,800	21,514
	Total B,C,D & E	3,676	13,452	40,235	2,679	5,536	5,716	22,057	74,372	5,763	9,913
	Total C,D & E	2,744	7,546	16,405	1,998	2,872	2,874	13,496	31,876	4,078	6,167
	Total C & D	1,100	6,888	13,913	1,682	2,716	2,064	12,288	28,218	3,433	5,750

Source: Derived from Statistics Canada and Provincial Sources.

Vegetables: Distribution of Farm Value, Intra-Regional and Inter-Regional, Average 1971-75

	Maritimes	Quebec	Ontario	Prairies	B.C.	Canada
	- per cent -					
<u>Intra-Regional Distribution</u>						
Potatoes	93.0	55.4	31.7	82.9	53.9	60.1
Main processing vegetables	3.5	17.3	39.0	5.0	17.4	20.1
Main organic soil vegetables	1.1	16.5	13.1	6.9	16.2	9.9
Other vegetables	2.4	10.7	16.2	5.2	12.4	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
<u>Inter-Regional Distribution</u>						
Potatoes	42.7	15.5	19.5	15.8	6.5	100.0
Main processing vegetables	4.8	14.4	71.6	2.8	6.3	100.0
Main organic soil vegetables	3.0	28.1	49.0	8.0	12.0	100.0
Other vegetables	6.8	18.1	60.0	6.0	9.1	100.0
Total	27.6	16.8	36.9	11.4	7.3	100.0

Source: Derived from Appendix Tables 13 and 15.

Vegetables: Unit Farm Value, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75	% Change 1961-65 to 1971-75	% Change 1966-70 to 1971-75	% Change 1971 to 1975
	- cents per pound -						- per cent -				
A. Potatoes	2.0	1.8	1.7	3.4	5.2	2.9	5.2	3.6	+ 80.0	+100.0	+205.9
B. Peas	4.4	4.8	4.8	5.0	5.5	8.7	10.6	7.3	+ 65.9	+ 52.1	+120.8
Sweet Corn	1.7	1.8	1.9	2.0	2.1	3.2	3.5	2.6	+ 52.9	+ 44.4	+ 84.2
Tomatoes	2.4	2.9	2.8	3.0	3.2	4.3	5.0	3.7	+ 54.2	+ 27.6	+ 78.6
Snap Beans	4.7	4.8	4.7	5.8	5.8	6.9	8.1	6.3	+ 34.0	+ 31.3	+ 72.3
Sub-Total B	2.5	2.9	2.8	2.9	3.2	4.6	5.2	3.8	+ 52.0	+ 31.0	+ 85.7
C. Carrots	2.0	2.1	2.6	2.9	2.7	3.4	2.6	2.8	+ 40.0	+ 33.3	-
Celery	2.7	3.5	3.4	4.3	5.2	5.3	6.8	5.1	+ 88.9	+ 45.7	+100.0
Lettuce	4.5	5.8	5.4	6.5	7.5	8.0	8.7	7.2	+ 60.0	+ 24.1	+ 61.1
Onions	2.5	3.1	2.9	7.2	5.3	4.8	7.3	5.4	+116.0	+ 74.2	+151.7
Sub-Total C	2.5	2.8	3.0	4.6	4.2	4.4	4.6	4.2	+ 68.0	+ 50.0	+ 53.3
D. Asparagus	20.1	25.2	30.2	32.2	33.3	40.1	45.5	36.3	+ 80.6	+ 44.0	+ 50.7
Beets	2.1	2.3	2.3	3.0	3.3	3.9	3.8	3.2	+ 52.4	+ 39.1	+ 65.2
Cabbage	2.1	2.7	2.8	4.0	4.4	3.9	4.6	4.0	+ 90.5	+ 48.1	+ 64.3
Cauliflower	5.1	6.4	7.2	9.0	9.2	10.8	13.0	9.9	+ 94.1	+ 54.7	+ 80.6
Cucumbers	3.8	4.7	4.5	5.0	4.6	6.4	7.8	5.7	+ 50.0	+ 21.3	+ 73.3
Parnips	3.9	4.8	5.4	7.3	6.6	9.7	10.9	7.5	+ 92.3	+ 56.3	+101.9
Spinach	4.6	5.3	7.3	9.1	8.6	11.8	9.9	9.4	+104.3	+ 77.4	+ 35.6
Sub-Total D	3.3	4.1	4.2	5.3	5.4	6.1	7.0	5.6	+ 69.7	+ 36.6	+ 66.7
E. Turnips	1.3	1.9	2.0	3.3	3.5	3.6	4.0	3.3	+153.8	+ 73.7	+100.0
Sub-Total D & E	2.2	3.2	3.5	4.6	4.7	5.2	6.1	4.9	+122.7	+ 53.1	+ 74.3
Total A,B,C,D & E	2.2	2.2	2.2	3.5	4.6	3.5	5.2	3.8	+ 72.7	+ 72.7	+136.4
Total B,C,D & E	2.4	2.9	3.0	3.7	3.8	4.7	5.2	4.1	+ 70.8	+ 41.4	+ 73.3
Total C,D & E	2.3	3.0	3.3	4.6	4.5	4.8	5.3	4.5	+ 95.7	+ 50.0	+ 60.6
Total C & D	2.8	3.3	3.5	4.9	4.6	5.0	5.5	4.7	+ 67.9	+ 42.4	+ 57.1

Source: Derived from Appendix Tables 9 and 13.

Vegetables: Unit Farm Value, by Commodity, by Region, 1961-65 and 1971-75

	1961-65					1971-75				
	Maritimes	Quebec	Ontario	Prairies	B.C.	Maritimes	Quebec	Ontario	Prairies	B.C.
	- cents per pound -									
A. Potatoes	1.8	2.0	2.2	2.3	3.0	3.3	4.0	4.2	3.3	4.7
B. Peas	..	4.4	5.1	..	4.8	6.1	6.7	7.8	6.9	7.7
Sweet corn	5.6	1.9	1.6	1.6	2.2	8.9	2.7	2.4	2.8	2.9
Tomatoes	7.6	3.0	2.2	6.4	4.2	13.5	6.8	3.5	15.0	9.1
Snap Beans	4.7	3.7	6.4	..	5.3	6.3	4.7	9.3	..	6.7
Sub-Total B	5.6	2.8	2.4	2.0	3.7	6.9	4.2	3.5	4.3	5.2
C. Carrots	4.1	1.9	1.8	2.9	4.2	2.6	2.6	2.5	5.3	7.2
Celery	-	2.7	2.3	3.9	4.5	-	4.2	4.8	7.8	8.1
Lettuce	7.8	3.7	4.9	5.2	4.5	16.9	5.7	9.1	9.6	6.5
Onions	-	2.6	2.2	3.4	4.2	-	4.3	5.6	6.5	7.1
Sub-Total C	4.6	2.2	2.3	3.2	4.3	3.2	3.4	4.2	5.8	7.0
D. Asparagus	-	21.1	20.7	15.0	16.8	-	29.3	38.1	31.5	31.9
Beets	5.7	1.7	2.0	2.4	3.7	5.7	2.5	3.0	5.8	9.1
Cabbage	3.4	1.9	1.8	2.3	4.3	5.6	3.2	3.6	5.2	7.5
Cauliflower	5.9	4.6	5.0	5.0	5.7	10.4	9.0	9.6	13.6	11.8
Cucumbers	5.6	3.7	3.5	5.2	4.9	7.5	4.7	5.8	11.6	8.3
Parsnips	6.0	..	3.7	..	5.7	12.9	..	5.6	12.2	12.1
Spinach	-	5.1	4.6	-	4.2	-	11.5	8.7	-	14.9
Sub-Total D	4.4	2.2	3.3	3.0	5.2	6.7	4.1	5.7	7.0	9.7
E. Turnips	1.0	1.9	1.4	2.0	2.7	2.4	3.7	3.1	5.1	6.7
Sub-Total D & E	1.3	2.1	2.4	2.5	4.7	3.8	4.0	4.9	6.2	9.1
Total A,B,C,D & E	1.8	2.1	2.3	2.4	3.4	3.4	3.9	4.0	3.5	5.4
Total B,C,D & E	1.6	2.4	2.3	3.2	4.1	4.7	3.8	3.9	5.3	6.5
Total C,D & E	1.5	2.2	2.3	2.9	4.5	3.6	3.6	4.5	6.0	7.8
Total C & D	4.5	2.2	2.6	3.2	4.6	4.5	3.6	4.8	6.2	7.8

Source: Derived from Appendix Tables 11 and 15.



Vegetables: Value per Acre, by Commodity, 1961-65, 1966-70, and 1971-75

	- dollars per acre -			% Change		% Change	
	Average 1961-65	Average 1966-70	Average 1971-75	1961-65 to 1966-70	1966-70 to 1971-75	1961-65 to 1971-75	
A. Potatoes	323.6	297.9	674.0	- 7.9	+126.3	+108.3	
B. Peas	104.0	121.5	186.3	+ 16.8	+ 53.3	+ 79.1	
Sweet corn	120.4	137.5	192.9	+ 14.2	+ 40.3	+ 60.2	
Tomatoes	569.7	717.4	1,057.4	+ 25.9	+ 47.4	+ 85.6	
Snap beans	166.8	193.5	252.6	+ 16.0	+ 30.5	+ 51.4	
Sub-Total B	211.9	243.8	334.7	+ 15.1	+ 37.3	+ 58.0	
C. Carrots	492.2	560.2	686.0	+ 13.8	+ 22.5	+ 39.4	
Celery	990.7	1,276.6	2,224.6	+ 28.9	+ 74.3	+124.5	
Lettuce	523.1	667.1	960.2	+ 27.5	+ 43.9	+ 83.6	
Onions	614.4	751.6	1,295.1	+ 22.3	+ 72.3	+110.8	
Sub-Total C	558.1	668.7	960.8	+ 19.8	+ 43.7	+ 72.2	
D. Asparagus	328.5	408.6	622.9	+ 24.4	+ 52.4	+ 89.6	
Beets	394.8	410.0	555.1	+ 3.9	+ 35.4	+ 40.6	
Cabbage	401.5	547.4	776.2	+ 36.3	+ 41.8	+ 93.3	
Cauliflower	567.1	699.4	1,040.1	+ 23.3	+ 48.7	+ 83.4	
Cucumbers	277.1	568.9	795.6	+105.3	+ 39.8	+187.1	
Parsnips	723.7	798.2	1,107.8	+ 10.3	+ 38.8	+ 53.1	
Spinach	487.8	451.5	618.8	- 7.4	+ 37.1	+ 26.9	
Sub-Total D	376.4	548.1	777.6	+ 45.6	+ 41.9	+106.6	
E. Turnips	313.8	463.1	781.5	+ 47.6	+ 68.8	+149.0	
Sub-Total D & E	353.1	522.8	778.5	+ 48.1	+ 48.9	+120.5	
Total A,B,C,D & E	303.7	316.5	580.6	+ 4.2	+ 83.4	+ 91.2	
Total B,C,D & E	279.5	340.9	480.3	+ 22.0	+ 40.9	+ 71.8	
Total C,D & E	431.8	583.0	855.4	+ 35.0	+ 46.7	+ 98.1	
Total C & D	493.2	608.4	871.2	+ 23.4	+ 43.2	+ 76.6	

Source: Derived from Appendix Tables 1 and 13.

Vegetables: Farm Value per Acre, Vegetables and Other Crops, by Region, Average 1971-75

	Canada	Maritimes	Quebec	Ontario	Prairies	B.C.
			- dollars per acre -			
<u>Other Crops</u> (a)						
Wheat	74.2	85.9	69.6	130.0	73.2 (b)	72.2
Grain Corn	165.0	..	185.8	163.1	116.4	..
Dry Peas	88.7	..	110.5	64.5	89.3	82.7
Dry Beans	201.6	..	107.0	202.4	..	..
Soybeans	143.3	..	..	143.3	-	-
Sugar Beets	420.5	-	335.4	-	428.7	-
<u>Fresh Vegetables</u>						
Potatoes	674.0	725.1	557.4	804.5	502.3	1,082.2
Main Processing Vegetables	334.7	212.4	168.6	444.4	229.4	370.1
Main Organic Soil Vegetables	960.8	662.4	534.1	1,422.4	1,283.3	1,895.8
Other Vegetables	778.5	629.0	465.5	957.9	971.8	917.3
Total Vegetables	580.6	665.9	390.5	652.3	506.1	840.4

(a) 1971-74 for "other crops."

(b) Manitoba only.

Source: Derived from Statistics Canada data.

Vegetables: Volume of Fresh Imports, by Commodity, 1961-1975 (a)

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
			- thousand pounds -					
A. Potatoes (b)	174,533	207,253	205,717	266,041	292,886	329,635	363,577	291,571
B. Peas	900	744	848	923	933	3,673	2,362	1,748
Sweet Corn	18,130	20,989	20,805	28,462	30,386	31,980	32,883	28,903
Tomatoes	166,299	200,394	192,291	219,235	242,143	228,439	233,385	223,099
Snap Beans	12,256	12,187	11,385	18,565	19,397	17,061	15,471	16,376
Sub-Total B	197,585	234,314	225,329	267,185	292,859	281,153	284,101	270,126
C. Carrots	78,239	74,287	73,028	69,522	56,674	73,215	72,434	68,975
Celery	103,086	118,225	134,771	125,345	134,109	139,220	147,953	136,280
Lettuce	190,439	248,361	265,220	298,129	313,653	343,862	376,271	319,427
Onions	60,606	80,623	71,597	86,288	77,305	103,001	109,124	89,463
Sub-Total C	432,370	521,496	544,616	579,284	581,741	659,298	705,782	614,145
D. Asparagus	5,781	8,113	9,388	11,404	11,557	11,797	12,860	11,401
Beets	2,069	1,668	1,166	2,010	3,946	7,622	..	3,686
Cabbage (c)	67,148	82,143	88,015	116,187	104,534	120,044	116,724	109,101
Cauliflower	13,867	12,456	12,731	17,891	15,507	17,502	20,680	16,862
Cucumbers	31,162	36,325	35,476	42,766	44,229	50,100	52,446	45,003
Parsnips	978	1,346	1,631	1,486	1,298	2,423	2,086	1,785
Spinach	7,450	7,832	8,774	8,959	10,376	11,522	10,495	10,025
Sub-Total D	128,455	149,883	157,181	200,703	191,447	221,010	215,291	197,863
E. Turnips	1,043	1,036	1,847	4,666	2,743	2,831	2,192	2,856
Sub-Total D & E	129,498	150,919	159,028	205,369	194,190	223,841	217,483	200,719
Total A,B,C,D & E	933,986	1,113,982	1,134,690	1,317,879	1,361,676	1,493,927	1,570,943	1,376,561
Total B,C,D & E	759,453	906,729	928,973	1,051,838	1,068,790	1,164,292	1,207,366	1,084,990
Total C,D & E	561,868	672,415	703,644	784,653	775,931	883,139	923,265	814,864
Total C & D	560,825	671,379	701,797	779,987	773,188	880,308	921,073	812,008

(a) Storable vegetables based on a July to June crop year; potatoes, carrots, onions, beets, parsnips and turnips.  
 (b) Excludes seed potatoes.  
 (c) Based on a June to May crop year.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Value of Fresh Imports, by Commodity, 1961-75

	<u>Average 1961-65</u>	<u>Average 1966-70</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>Average 1971-75</u>
				- thousand dollars -				
A. Potatoes (a)	5,649	6,764	6,288	12,449	18,155	19,107	23,856	15,971
B. Peas	141	168	251	290	331	624	608	421
Sweet Corn	976	1,317	1,458	1,838	2,341	2,633	3,287	2,311
Tomatoes	14,379	21,360	26,839	28,276	33,015	37,237	45,920	34,257
Snap Beans	1,404	1,783	1,874	2,570	3,125	3,450	3,505	2,905
Sub-Total B	16,900	24,628	30,422	32,974	38,812	43,944	53,320	39,894
C. Carrots	2,939	3,149	4,151	3,248	3,390	6,208	4,704	4,340
Celery	5,089	7,153	7,802	9,903	9,436	9,392	12,794	9,866
Lettuce	8,935	13,689	17,495	19,013	25,604	25,609	28,720	23,288
Onions	2,553	3,744	3,429	8,473	5,528	7,502	10,764	7,139
Sub-Total C	19,516	27,735	32,877	40,637	43,958	48,711	56,982	44,633
D. Asparagus	1,086	2,045	2,643	3,271	3,532	4,036	4,845	3,665
Beets	87	97	64	130	180	224	..	150
Cabbage	2,650	3,550	3,776	6,190	5,266	7,050	6,646	5,786
Cauliflower	1,435	1,624	1,805	2,211	2,497	3,070	3,941	2,705
Cucumbers	1,978	2,859	2,992	3,436	4,714	5,335	7,131	4,722
Parsnips	95	137	193	180	187	382	285	245
Spinach	572	732	949	1,001	1,266	1,476	1,545	1,248
Sub-Total D	7,903	11,044	12,422	16,419	17,642	21,573	24,393	18,521
E. Turnips	..	76	138	393	243	228	..	251
Sub-Total D & E	7,903	11,120	12,560	16,812	17,885	21,801	24,393	18,772
Total A,B,C,D & E	49,968	70,247	82,147	102,872	118,810	133,563	158,551	119,270
Total B,C,D & E	44,319	63,483	75,859	90,423	100,655	114,456	134,695	103,299
Total C,D & E	27,419	38,855	45,437	57,449	61,843	70,512	81,375	63,405
Total C & D	27,419	38,779	45,299	57,056	61,600	70,284	81,375	63,154

## Vegetables: Value of Fresh Imports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
			- thousand dollars -					
F. Broccoli	..	1,436	2,138	2,529	3,303	4,103	5,002	3,415
Brussels Sprouts	536	711	811	768	884	874	1,251	918
Eggplant	..	438	564	625	804	1,068	1,220	856
Endive	..	315	483	463	586	617	687	567
Horseradish	..	70	44	45	43	96	..	57
Mushrooms	350	754	266	268	2,371	1,941	752	1,120
Parsley	..	249	345	400	512	530	623	482
Peppers	1,735	3,657	5,178	5,870	7,492	8,595	10,902	7,607
Radishes	..	1,105	1,452	1,506	1,720	2,202	2,432	1,862
Rhubarb	..	10	32	15	4	20	16	17
Shallots	1,226	2,081	2,472	3,047	3,289	3,660	4,731	3,440
Sub-Total F	3,847	10,826	13,785	15,536	21,008	23,706	27,616	20,341
Total Imports of Storable Fresh Vegetables (b)	13,973	17,587	18,083	31,108	32,992	40,797	47,255	33,939
Total Imports of Non-Storable Fresh vegetables (c)	39,842	63,486	77,849	87,300	106,826	116,472	139,912	105,672
Total Imports of Storable and Non-Storable Fresh Imports	53,815	81,073	95,932	118,408	139,818	157,269	186,167	139,611

Appendix Table 22 (concl.)

(a) Excludes seed potatoes.

(b) Storable vegetables are: potatoes, carrots, onions, beets, cabbage, parsnips, turnips and horseradish.

(c) Non-storable vegetables are: peas, sweet corn, tomatoes, snap beans, celery, lettuce, asparagus, cauliflower, cucumbers, spinach, broccoli, Brussels sprouts, eggplant, endive, mushrooms, parsley, peppers, radishes, rhubarb and shallots.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Volume of Fresh Non-Competing Imports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand pounds -				
A. Potatoes	-	-	-	-	-	-	-	-
B. Peas	476	428	654	666	699	2,248	825	1,019
Sweet Corn	11,785	14,536	14,311	20,632	20,405	20,049	21,504	19,380
Tomatoes	55,666	68,191	67,528	75,715	81,345	83,174	83,073	78,167
Snap Beans	10,622	10,753	10,205	13,828	14,421	14,251	13,593	13,260
Sub-Total B	78,549	93,908	92,698	110,841	116,870	119,722	118,995	111,826
C. Carrots	29,475	31,869	35,653	32,721	28,104	31,848	27,967	31,259
Celery	97,016	111,506	128,370	114,739	126,941	128,861	139,497	127,682
Lettuce	142,744	183,814	188,785	202,656	230,802	237,510	247,742	221,499
Onions	-	-	-	-	-	-	-	-
Sub-Total C	269,235	327,189	352,808	350,116	385,847	398,219	415,206	380,440
D. Asparagus	2,684	2,863	2,503	4,095	4,166	3,581	3,121	3,493
Beets	1,405	1,155	546	1,479	791	708	..	881
Cabbage	26,371	31,754	32,794	38,887	43,224	38,862	36,461	38,046
Cauliflower	11,747	10,601	10,986	13,449	12,289	13,893	17,041	13,531
Cucumbers	7,349	9,914	14,983	16,547	17,153	20,532	18,844	17,611
Parsnips	211	296	373	301	330	853	565	484
Spinach	6,795	6,942	7,948	8,028	8,885	9,548	8,754	8,632
Sub-Total D	56,562	63,525	70,133	82,786	86,838	87,977	84,786	82,678
E. Turnips	406	511	1,217	2,791	547	980	756	1,258
Sub-Total D & E	56,968	64,036	71,350	85,577	87,385	88,957	85,542	83,936
Total A,B,C,D & E	404,752	485,133	516,856	546,534	590,102	606,898	619,743	576,202
Total B,C,D & E	404,752	485,133	516,856	546,534	590,102	606,898	619,743	576,202
Total C,D & E	326,203	391,225	424,158	435,693	473,232	487,176	500,748	464,376
Total C & D	325,797	390,714	422,941	432,892	472,685	486,196	499,992	463,118

Source: Derived from Agriculture Canada and Statistics Canada data.



Vegetables: Value of Fresh Non-Competing Imports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand dollars -				
A. Potatoes	-	-	-	-	-	-	-	-
B. Peas	97	125	190	242	263	460	397	311
Sweet Corn	617	938	1,014	1,315	1,539	1,569	2,153	1,518
Tomatoes	4,766	7,466	9,785	9,475	10,991	12,886	16,580	11,943
Snap Beans	1,271	1,605	1,702	2,139	2,630	2,967	3,138	2,516
Sub-Total B	6,751	10,134	12,691	13,171	15,423	17,882	22,268	16,288
C. Carrots	1,175	1,225	1,640	1,444	1,629	2,898	1,579	1,838
Celery	4,813	6,715	7,348	9,236	8,803	8,491	11,843	9,145
Lettuce	6,632	10,228	12,988	14,162	16,953	16,411	19,242	15,951
Onions	-	-	-	-	-	-	-	-
Sub-Total C	12,620	18,168	21,976	24,842	27,385	27,800	32,664	26,934
D. Asparagus	493	661	577	1,020	1,120	1,158	1,231	1,021
Beets	59	66	43	99	70	79	..	73
Cabbage	1,552	1,387	1,218	2,738	1,950	2,331	1,842	2,016
Cauliflower	1,234	1,390	1,557	1,744	2,002	2,437	3,262	2,201
Cucumbers	662	1,059	1,337	1,493	1,931	2,240	3,174	2,036
Parsnips	22	33	45	44	50	132	63	66
Spinach	512	640	853	897	1,050	1,180	1,281	1,053
Sub-Total D	4,534	5,236	5,630	8,035	8,173	9,557	10,853	8,466
E. Turnips	..	33	86	233	48	81	..	112
Sub-Total D & E	4,534	5,269	5,716	8,268	8,221	9,638	10,853	8,578
Total A,B,C,D & E	23,905	33,571	40,383	46,281	51,029	55,320	65,785	51,800
Total B,C,D & E	23,905	33,571	40,383	46,281	51,029	55,320	65,785	51,800
Total C,D & E	17,154	23,437	27,692	33,110	35,606	37,438	43,517	35,512
Total C & D	17,154	23,404	27,606	32,877	35,558	37,357	43,517	35,400

Vegetables: Value of Fresh Non-Competing Imports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand dollars -				
F. Broccoli	..	1,239	1,809	1,965	2,662	3,222	3,994	2,730
Brussels Sprouts	438	593	726	678	792	778	1,105	816
Eggplant	..	329	470	451	632	772	964	657
Endive	..	271	421	401	484	498	592	479
Horseradish	-	-	-	-	-	-	-	-
Mushrooms	-	-	-	-	-	-	-	-
Parsley	..	226	305	358	452	421	546	417
Peppers	1,556	3,198	4,680	4,981	6,267	7,126	9,252	6,461
Radishes	..	836	1,117	1,067	1,199	1,336	1,587	1,261
Rhubarb	..	9	32	13	4	19	13	16
Shallots	979	1,636	1,894	2,374	2,491	2,528	3,614	2,580
Sub-Total F	2,973	8,337	11,454	12,288	14,983	16,700	21,667	15,417
Total Imports of Storable Fresh Vegetables	2,808	2,744	3,032	4,558	3,747	5,521	3,484	4,105
Total Imports of Non-Storable Fresh Vegetables	24,070	39,164	48,805	54,011	62,265	66,499	83,968	63,112
Total Imports of Storable and Non-Storable Fresh Vegetables	26,878	41,908	51,837	58,569	66,012	72,020	87,452	67,217

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Volume of Fresh Competing Imports, (a) by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
			- thousand pounds -					
A. Potatoes (b)	174,533	207,253	205,717	266,041	292,886	329,635	363,577	291,571
B. Peas	424	316	194	257	234	1,425	1,537	729
Sweet Corn	6,345	6,453	6,494	7,830	9,981	11,931	11,379	9,523
Tomatoes	110,633	132,203	124,763	143,520	160,798	145,265	150,312	144,932
Snap Beans	1,634	1,434	1,180	4,737	4,976	2,810	1,878	3,116
Sub-Total B	119,036	140,406	132,631	156,344	175,989	161,431	165,106	158,300
C. Carrots	48,764	42,418	37,375	36,801	28,570	41,367	44,467	37,716
Celery	6,070	6,719	6,401	10,606	7,168	10,359	8,456	8,598
Lettuce	47,695	64,547	76,435	95,473	82,851	106,352	128,529	97,928
Onions	60,606	80,623	71,597	86,288	77,305	103,001	109,124	89,463
Sub-Total C	163,135	194,307	191,808	229,168	195,894	261,079	290,576	233,705
D. Asparagus	3,097	5,250	6,885	7,309	7,391	8,216	9,739	7,908
Beets	664	513	620	531	3,155	6,914	..	2,805
Cabbage	40,777	50,389	55,221	77,300	61,310	81,182	80,263	71,055
Cauliflower	2,120	1,855	1,745	4,442	3,218	3,609	3,639	3,331
Cucumbers	23,813	26,411	20,493	26,219	27,076	29,568	33,602	27,392
Parsnips	767	1,050	1,258	1,185	968	1,570	1,521	1,300
Spinach	655	890	826	931	1,491	1,974	1,741	1,393
Sub-Total D	71,893	86,358	87,048	117,917	104,609	133,033	130,505	115,184
E. Turnips	637	525	630	1,875	2,196	1,851	1,436	1,598
Sub-Total D & E	72,530	86,883	87,678	119,792	106,805	134,884	131,941	116,782
Total A,B,C,D & E	529,234	628,849	617,834	771,345	771,574	887,029	951,200	800,358
Total B,C,D & E	354,701	421,596	412,117	505,304	478,688	557,394	587,623	508,787
Total C,D & E	235,665	281,190	279,486	348,960	302,699	395,963	422,517	350,487
Total C & D	235,028	280,665	278,856	347,085	300,503	394,112	421,081	348,889

(a) Imports during Canadian marketing period.

(b) Excludes seed potatoes.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Volume of Fresh Competing Imports, Fresh Market and Processing,  
by Commodity, Average 1961-65, 1966-70 and 1971-74

	Imports for Processing (a)				Competing Imports for the Fresh Market		
	1961-65		1971-74		1966-70		1971-74
				- thousand pounds -			
A. Potatoes (b)	30,186	63,071	123,870		144,347	144,182	149,700
B. Peas	522	461	1,244				
Sweet Corn	-	-	-		6,345	6,453	9,059
Tomatoes	-	-	-		110,633	132,203	143,587
Snap Beans	834		2,878		800	1,434	548
Sub-Total B	1,356	461	4,122		117,778	140,090	153,194
C. Carrots	-	-	-		48,764	42,418	36,028
Celery					6,070	6,719	8,634
Lettuce	-	-	-		47,695	64,547	90,278
Onions	952	627	3,919		59,654	79,996	80,629
Sub-Total C	952	627	3,919		162,183	193,680	215,569
D. Asparagus	2,279	4,929	7,446		818	321	
Beets	200		2,270			513	535
Cabbage	-	-	-		40,777	50,389	68,753
Cauliflower	56	104	65		2,064	1,855	3,189
Cucumbers	10,556	10,500	3,000		13,257	15,911	22,839
Parsnips	-	-	-		767	1,050	1,245
Spinach	-	-	-		655	890	1,306
Sub-Total D	13,091	15,533	12,781		58,338	70,929	97,867
E. Turnips	-	-	-		637	525	1,638
Sub-Total D & E	13,091	15,533	12,781		58,975	71,454	99,505
Total A, B, C, D & E	45,585	79,692	144,692		483,283	549,406	617,968
Total B, C, D & E	15,399	16,621	20,822		338,936	405,224	468,268
Total C, D & E	14,043	16,160	16,700		221,158	265,134	315,074
Total C & D	14,043	16,160	16,700		220,521	264,609	313,436

(a) Imports for processing are for full crop year.

(b) Excludes seed potatoes.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Competing Fresh Market and Processing Imports as a Percentage of Production for the Fresh Market and for Processing, by Commodity, Average 1961-65 and 1971-74

		Imports for Processing (b) as a Percentage of Production for Processing	Competing Imports for Fresh Market as a Percentage of Production for Fresh Market		Total Imports as a Percentage of Total Production	
			1961-65	1971-74	1961-65	1971-75
			- per cent -			
A.	Potatoes (a)	5.0	8.2	4.5	5.6	6.0
B.	Peas	0.1	0.9	..	..	..
	Sweet Corn	-	-	9.2	13.6	1.8
	Tomatoes	-	-	76.8	198.3	13.8
	Snap Beans	1.3	3.6	5.8	4.4	3.3
	Sub-Total B	0.1	0.3	51.8	101.0	8.6
C.	Carrots	-	-	19.1	13.5	15.8
	Celery	..	..	16.2	22.3	13.9
	Lettuce	-	-	82.9	133.5	82.9
	Onions	23.1	158.3	27.2	40.8	27.1
	Sub-Total C	1.5	4.3	28.4	37.7	25.7
D.	Asparagus	55.7	200.6	34.9	..	48.1
	Beets	0.8	7.7	..	5.4	7.0
	Cabbage	-	-	32.6	46.0	29.7
	Cauliflower	1.2	1.0	7.3	11.4	6.4
	Cucumbers	21.2	3.0	64.6	83.6	33.8
	Parsnips	-	-	5.2	11.9	5.2
	Spinach	-	-	7.9	33.7	5.8
	Sub-Total D	13.4	7.9	25.9	42.3	22.2
E.	Turnips	-	-	0.2	0.8	0.8
	Sub-Total D & E	13.2	7.8	9.4	23.0	10.0
	Total A,B,C,D & E	2.4	4.6	10.5	16.1	7.2
	Total B,C,D & E	1.2	1.3	23.8	40.5	12.9
	Total C,D & E	8.6	6.5	18.5	31.4	17.3
	Total C & D	8.6	6.6	27.7	39.1	24.5

(a) Excludes Seed Potatoes.

(b) Imports for processing are for full crop year.

Source: Derived from Appendix Tables 12, 26 and Statistics Canada.

Vegetables: Additional Domestic Acreage Required to Displace Imports, by Commodity, Average 1971-1975 (a)

		Total Acres	Acres required for Fresh		Acres required for Processed		Total	
		1971-75	Competing	Imports	Imports		Acreage required	
		-acres-		%	-acres-	%	-acres-	%
		(b)						
A.	Potatoes	263,220	15,738	6.0	3,550	1.3	19,288	7.3
B.	Peas	56,432	284	0.5	827	1.5	1,111	2.0
	Sweet Corn	69,697	1,273	1.8	729	1.1	2,002	2.9
	Tomatoes	27,901	5,020	18.0	14,234	51.0	19,254	69.0
	Snap Beans	23,220	773	3.3	467	2.0	1,240	5.3
	Sub-Total B	177,250	7,350	4.1	16,257	9.2	23,607	13.3
C.	Carrots	15,519	1,555	10.0	930	6.0	2,485	16.0
	Celery	1,113	196	17.6	-	-	196	17.6
	Lettuce	5,148	7,387	143.5	-	-	7,387	143.5
	Onions	8,559	3,747	43.8	-	-	3,747	43.8
	Sub-Total C	30,339	12,885	42.5	930	3.1	13,815	45.5
D.	Asparagus	3,612	4,608	127.6	603	16.7	5,211	144.3
	Beets(c)	2,300	164	7.1	-	-	164	7.1
	Cabbage	8,990	3,640	40.5	-	-	3,640	40.5
	Cauliflower	3,418	318	9.3	-	-	318	9.3
	Cucumbers	9,305	1,960	21.1	364	3.9	2,324	25.0
	Parsnips	510	88	17.3	-	-	88	17.3
	Spinach	863	211	24.4	664	76.9	875	101.4
	Sub-Total D	28,998	10,989	37.9	1,631	5.6	12,620	43.5
E.	Turnips	8,621	68	0.8	-	-	68	0.8
	Sub-Total D & E	37,619	11,057	29.4	1,631	4.3	12,688	33.7
Total A,B,C,D & E		508,428	47,030	9.3	22,368	4.4	69,398	13.6
Total B,C,D & E		245,208	31,292	12.8	18,818	7.7	50,110	20.4
Total C,D & E		67,958	23,942	35.2	2,561	3.8	26,503	39.0
Total C & D		59,337	23,874	40.2	2,561	4.3	26,435	44.6

(a) Based on Average Canadian Yield, 1971-75.

(b) Total acreage including Seed Potatoes.

(c) Based on average 1971-74 data.

Source: Derived from Statistics Canada, Agriculture Canada and Provincial Sources.



Vegetables: Value of Fresh Competing Imports (a), by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand dollars -				
A. Potatoes (b)	5,649	6,764	6,288	12,449	18,155	19,107	23,856	15,971
B. Peas	44	43	61	48	68	164	211	110
Sweet Corn	359	379	444	523	802	1,064	1,134	793
Tomatoes	9,613	13,894	17,054	18,801	22,024	24,351	29,340	22,314
Snap Beans	133	178	172	431	495	483	367	389
Sub-Total B	10,149	14,494	17,731	19,803	23,389	26,062	31,052	23,606
C. Carrots	1,764	1,924	2,511	1,804	1,761	3,310	3,125	2,502
Celery	276	438	454	667	633	901	951	721
Lettuce	2,303	3,461	4,507	4,851	8,651	9,198	9,478	7,337
Onions	2,553	3,744	3,429	8,473	5,528	7,502	10,764	7,139
Sub-Total C	6,896	9,567	10,901	15,795	16,573	20,911	24,318	17,699
D. Asparagus	593	1,384	2,066	2,251	2,412	2,878	3,614	2,644
Beets	28	31	21	31	110	145	..	77
Cabbage	1,098	2,163	2,558	3,452	3,316	4,719	4,804	3,770
Cauliflower	201	234	248	467	495	633	679	504
Cucumbers	1,316	1,800	1,655	1,943	2,783	3,095	3,957	2,686
Parsnips	73	104	148	136	137	250	222	179
Spinach	60	92	96	104	216	296	264	195
Sub-Total D	3,369	5,808	6,792	8,384	9,469	12,016	13,540	10,055
E. Turnips	..	43	52	160	195	147	..	139
Sub-Total D & E	3,369	5,851	6,844	8,544	9,664	12,163	13,540	10,194
Total A,B,C,D & E	26,063	36,676	41,764	56,591	67,781	78,243	92,766	67,470
Total B,C,D & E	20,414	29,912	35,476	44,142	49,626	59,136	68,910	51,499
Total C,D & E	10,265	15,418	17,745	24,339	26,237	33,074	37,858	27,893
Total C & D	10,265	15,375	17,693	24,179	26,042	32,927	37,858	27,754

Vegetables: Value of Fresh Competing Imports (a), by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand dollars -							
F. Broccoli	..	197	329	564	641	881	1,008	685
Brussels Sprouts	98	118	85	90	92	96	146	102
Eggplant	..	109	94	174	172	296	256	199
Endive	..	44	62	62	102	119	95	88
Horseradish	..	70	44	45	43	96	..	57
Mushrooms	350	754	266	268	2,371	1,941	752	1,120
Parsley	..	23	40	42	60	109	77	65
Peppers	179	459	498	889	1,225	1,469	1,650	1,146
Radishes	..	269	335	439	521	866	845	601
Rhubarb	..	1	*	2	*	1	3	1
Shallots	247	445	578	673	798	1,132	1,117	860
Sub-Total F	874	2,489	2,331	3,248	6,025	7,006	5,949	4,924
Total Imports of Storable Fresh Vegetables	11,165	14,843	15,051	26,550	29,245	35,276	42,771	29,834
Total Imports of Non- Storable Fresh Vegetables	15,772	24,322	29,044	33,289	44,561	49,973	55,944	42,560
Total Imports of Storable and Non-Storable Fresh Vegetables	26,937	39,165	44,095	59,839	73,806	85,249	98,715	72,394

(a) Imports during the period in which Canadian produce is marketed.

(b) Excludes seed potatoes.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Volume of Processed Imports, (a) by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand pounds -				
A. Potatoes	72,659	114,259	45,742	59,899	94,479	67,028	61,703	65,770
B. Peas	822	2,931	1,274	1,497	3,159	2,906	1,772	2,122
Sweet Corn	2,158	2,880	685	720	1,413	19,881	4,562	5,452
Tomatoes	186,743	308,685	320,269	348,989	475,614	524,475	385,568	410,983
Snap Beans	2,036	419	43	539	1,977	4,416	2,426	1,880
Sub-Total B	191,759	314,915	322,271	351,745	482,163	551,678	394,328	420,437
C. Carrots	2,273	10,701	19,657	23,061	25,177	19,722	25,124	22,548
Celery	-	-	-	-	-	-	-	-
Lettuce	-	-	-	-	-	-	-	-
Onions	-	-	-	-	-	-	-	-
Sub-Total C	2,273	10,701	19,657	23,061	25,177	19,722	25,124	22,548
D. Asparagus	781	629	799	945	1,087	1,104	1,242	1,035
Beets	-	-	-	-	-	-	-	-
Cabbage	-	-	-	-	-	-	-	-
Cauliflower	-	-	-	-	-	-	-	-
Cucumbers	6,795	4,855	1,357	5,845	6,704	5,818	5,686	5,082
Parsnips	-	-	-	-	-	-	-	-
Spinach	1,944	2,736	3,523	4,227	4,979	5,182	4,035	4,389
Sub-Total	9,520	8,220	5,679	11,017	12,770	12,104	10,963	10,507
E. Turnips	-	-	-	-	-	-	-	-
Sub-Total D & E	9,520	8,220	5,679	11,017	12,770	12,104	10,963	10,507
Total A,B,C,D & E	276,211	448,095	393,349	445,722	614,589	650,532	492,118	519,262
Total B,C,D & E	203,552	333,836	347,607	385,823	520,110	583,504	430,415	453,492
Total C,D & E	11,793	18,921	25,336	34,078	37,947	31,826	36,087	33,055
Total C & D	11,793	18,921	25,336	34,078	37,947	31,826	36,087	33,055

(a) Processed Imports converted to fresh equivalent.

Source: Derived from Statistics Canada, Agriculture Canada and U.S. Department of Commerce data.

Vegetables: Processed Imports<sup>(a)</sup> as a Percentage of Total Canadian Production and Canadian Production for Processing, Average 1961-65 and 1971-75

	Processed Imports as a Percentage of:			
	Total Canadian Production		Canadian Production for Processors	
	1961-65	1971-75	1961-65	1971-75
	- per cent -			
A. Potatoes <sup>(b)</sup>	1.6	1.4	12.1	4.3
B. Peas	0.6	1.5	0.6	1.5
Sweet Corn	0.6	1.1	0.7	1.2
Tomatoes	23.2	51.0	28.3	56.0
Snap Beans	2.6	2.0	3.1	2.3
Sub-Total B	13.8	26.9	16.5	29.8
C. Carrots	0.7	6.0	4.2	29.5
Celery	-	-	-	-
Lettuce	-	-	-	-
Onions	-	-	-	-
Sub-Total C	0.4	3.2	3.5	25.9
D. Asparagus	12.1	16.7	19.1	28.5
Beets	-	-	-	-
Cabbage	-	-	-	-
Cauliflower	-	-	-	-
Cucumbers	9.6	3.9	13.6	4.9
Parsnips	-	-	-	-
Spinach	17.1	76.9	63.5	230.2
Sub-Total D	2.9	2.6	9.7	6.3
E. Turnips	-	-	-	-
Sub-Total D & E	1.3	1.7	9.6	6.2
Total A,B,C,D & E	3.8	6.7	14.4	16.3
Total B,C,D & E	7.4	15.8	15.4	27.2
Total C,D & E	0.9	2.5	7.2	12.9
Total C & E	1.2	3.0	7.3	13.0

(a) Processed imports converted to fresh equivalent.

(b) Excludes seed potatoes.

Source: Derived from Appendix Tables 9, 12 and 29.

Vegetables: Total Volume of Imports of Fresh and Processed Vegetables, (a) by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
			- thousand pounds -					
A. Potatoes (b)	255,350	329,889	259,013	334,560	396,130	408,035	437,246	366,997
B. Peas	1,722	3,675	2,122	2,420	4,092	6,579	4,134	3,870
Sweet Corn	20,288	23,869	21,490	29,182	31,799	51,861	37,445	34,355
Tomatoes	353,042	509,079	512,560	568,224	717,757	752,914	618,953	634,082
Snap Beans	14,292	12,606	11,428	19,104	21,374	21,477	17,897	18,256
Sub-Total B	389,344	549,229	547,600	618,930	775,022	832,831	678,429	690,563
C. Carrots	80,512	84,988	92,685	92,583	81,851	92,937	97,558	91,523
Celery	103,086	118,225	134,771	125,345	134,109	139,220	147,953	136,280
Lettuce	190,439	248,361	265,220	298,129	313,653	343,862	376,271	319,427
Onions	60,606	80,623	71,597	86,288	77,305	103,001	109,124	89,463
Sub-Total C	434,643	532,197	564,273	602,345	606,918	679,020	730,906	636,693
D. Asparagus	6,562	8,742	10,187	12,349	12,644	12,901	14,102	12,437
Beets	2,069	1,668	1,166	2,010	3,946	7,622	..	3,686
Cabbage	67,148	82,143	88,015	116,187	104,534	120,044	116,724	109,101
Cauliflower	13,867	12,456	12,731	17,891	15,507	17,502	20,680	16,862
Cucumbers	37,957	41,180	36,833	48,611	50,933	55,918	58,132	50,085
Parsnips	978	1,346	1,631	1,486	1,298	2,423	2,086	1,785
Spinach	9,394	10,568	12,297	13,186	15,355	16,704	14,530	14,414
Sub-Total D	137,975	158,103	162,860	211,720	204,217	233,114	226,254	208,370
E. Turnips	1,043	1,036	1,847	4,666	2,743	2,831	2,192	2,856
Sub-Total D & E	139,018	159,139	164,707	216,386	206,960	235,945	228,446	211,226
Total A,B,C,D & E	1,218,355	1,570,454	1,535,593	1,772,221	1,985,030	2,155,831	2,075,027	1,905,479
Total B,C,D & E	963,005	1,240,565	1,276,580	1,437,661	1,588,900	1,747,796	1,637,781	1,538,482
Total C,D & E	573,661	691,336	728,980	818,731	813,878	914,965	959,352	847,919
Total C & D	572,618	690,300	727,133	814,065	811,135	912,134	957,160	845,063

Appendix Table 32

(a) Processed Imports converted to fresh equivalent.

(b) Includes Seed Potatoes.

Source: Derived from Statistics Canada, Agriculture Canada and the U.S. Department of Commerce data.

Vegetables: Percentage Distribution of Fresh Imports, by Region, by Commodity,  
Average 1966-70 and 1971-75

	Average 1966-70				Average 1971-75					
	Maritimes	Quebec	Ontario	Prairies	B.C.	Maritimes	Quebec	Ontario	Prairies	B.C.
	- per cent -									
A. Potatoes (a)	7.0	16.8	30.2	23.0	23.1	21.9	17.9	21.3	16.4	22.5
B. Peas	8.5	16.6	54.4	2.3	18.2	38.5	8.2	34.7	4.9	13.6
Sweet Corn	2.8	29.6	44.7	9.7	13.3	3.3	25.8	38.0	16.0	17.0
Tomatoes	5.4	35.0	28.3	18.5	12.8	6.2	31.6	28.2	20.4	13.6
Snap Beans	2.4	35.8	55.6	1.0	5.2	2.3	41.2	45.4	2.2	8.9
Sub-Total B	5.1	34.4	31.3	16.7	12.5	5.9	31.4	30.3	18.7	13.7
C. Carrots	11.6	31.7	29.6	11.3	15.8	9.3	30.9	26.4	12.3	21.0
Celery	3.9	33.9	36.6	15.0	10.5	4.0	34.0	35.8	16.0	10.2
Lettuce	4.1	30.4	34.9	19.8	10.9	4.5	31.6	34.3	18.5	11.1
Onions	6.7	25.6	29.6	17.8	20.3	6.9	19.0	26.7	21.5	25.9
Sub-Total C	5.5	30.6	33.7	17.2	12.9	5.3	30.3	32.7	17.7	14.0
D. Asparagus	0.1	18.8	29.1	2.5	49.6	0.1	17.3	24.1	2.7	55.8
Beets	..	..	..	..	..	0.8	46.9	40.4	5.5	6.4
Cabbage	9.8	24.2	37.9	18.1	10.0	9.1	27.8	36.0	17.2	9.9
Cauliflower	1.6	14.1	41.1	24.0	19.2	1.9	17.2	31.7	23.6	25.5
Cucumbers	8.3	31.0	40.0	13.6	7.1	9.0	32.7	29.4	19.6	9.3
Parsnips	7.4	10.4	0.7	23.4	58.0	6.7	9.8	3.1	26.9	53.5
Spinach	4.6	16.2	63.0	1.2	15.0	5.2	19.6	53.8	4.6	16.8
Sub-Total D	7.9	24.2	39.2	15.8	12.9	7.5	27.2	34.1	16.7	14.5
E. Turnips	3.2	50.3	-	12.9	33.5	17.6	44.6	10.9	12.0	14.9
Sub-Total D & E	7.9	24.4	38.9	15.8	13.1	7.7	27.4	33.8	16.6	14.5
Total A,B,C,D & E	6.0	27.9	33.2	18.0	14.8	9.1	27.6	30.1	17.5	15.8
Total B,C,D & E	5.8	30.6	33.9	16.8	12.9	5.9	30.0	32.3	17.8	14.0
Total C,D & E	6.1	29.3	34.8	16.9	13.0	5.8	29.5	33.0	17.5	14.2
Total C & D	6.1	29.2	34.9	16.9	12.9	5.8	29.5	33.0	17.4	14.2

(a) Excludes Seed Potatoes.

Source: Derived from Statistics Canada and Agriculture Canada Data.



Vegetables: Fresh Imports as a Percentage of Production, by Region, by Commodity, Average 1971-75

	Maritimes	Quebec	Ontario	Prairies	B.C.
			- per cent -		
A. Potatoes (a)	2.9	6.8	6.0	5.3	24.4
B. Peas	2.9	0.5	1.0	0.8	1.7
Sweet Corn	29.9	7.2	2.6	17.4	13.2
Tomatoes	452.6	275.3	8.2	6,257.7	556.9
Snap Beans	2.9	14.2	32.6	**	14.2
Sub-Total B	39.0	41.9	6.8	128.2	51.4
C. Carrots	23.8	14.9	10.6	34.5	140.0
Celery	(b)	383.1	161.6	1,113.9	305.6
Lettuce	1,273.8	384.6	482.8	81,072.3	195.1
Onions	(b)	27.6	19.1	137.9	128.0
Sub-Total C	114.1	77.2	58.3	270.8	171.0
D. Asparagus	(b)	381.4	59.2	169.1	739.5
Beets	1.1	15.4	5.9	34.8	19.6
Cabbage	91.8	55.0	42.8	153.8	84.4
Cauliflower	21.5	49.5	24.0	347.9	86.2
Cucumbers	231.7	50.0	14.1	546.1	123.9
Parsnips	9.4	7.0	1.0	73.8	402.2
Spinach	(b)	370.2	112.5	(b)	440.0
Sub-Total D	83.2	51.1	27.1	203.4	120.4
E. Turnips	1.5	4.0	0.3	2.8	7.0
Sub-Total D & E	29.1	39.7	18.4	114.3	96.5
Total A,B,C,D & E	5.1	29.4	14.8	24.5	53.1
Total B,C,D & E	52.2	56.0	16.9	177.1	99.6
Total C,D & E	59.0	63.6	37.8	205.3	143.3
Total C & D	102.2	69.3	45.3	251.5	154.9

(a) Excludes Seed Potatoes.

(b) No recorded commercial production.

Source: Derived from Statistics Canada and Agriculture Canada data.

Vegetables: Per Capita Imports of Fresh Vegetables, by Region, by Commodity,  
Average 1966-70 and 1971-75

	Average 1966-70				Average 1971-75			
	Maritimes		B.C.		Maritimes		B.C.	
	Quebec	Ontario	Prairies	- pounds per capita -	Quebec	Ontario	Prairies	
A. Potatoes (a)	10.1	6.2	9.1	14.5	25.2	37.7	8.0	7.3
B. Peas	0.1	*	0.1	*	0.1	0.5	*	0.1
Sweet Corn	0.4	1.1	1.3	0.6	1.4	0.4	1.2	1.4
Tomatoes	7.3	11.9	7.8	10.7	12.8	8.8	11.6	7.9
Snap Beans	0.2	0.7	0.9	*	0.3	0.2	1.1	0.9
Sub-Total B	7.9	13.7	10.1	11.4	14.6	10.1	13.9	10.3
C. Carrots	5.9	4.1	3.1	2.5	6.1	4.1	3.5	2.3
Celery	3.1	6.8	6.0	5.2	6.2	3.5	7.6	6.1
Lettuce	6.7	12.8	11.9	14.3	13.5	9.2	16.5	13.8
Onions	3.6	3.5	3.3	4.1	8.1	3.7	2.6	2.8
Sub-Total C	19.4	27.1	24.3	26.1	33.9	20.4	30.2	25.0
D. Asparagus	*	0.3	0.3	0.1	2.0	*	0.3	0.3
Beets	**	**	**	**	**	*	0.3	0.2
Cabbage	5.2	3.3	4.2	4.2	4.0	6.1	4.8	4.7
Cauliflower	0.1	0.3	0.7	0.9	1.2	0.2	0.5	0.7
Cucumbers	2.0	1.9	2.0	1.4	1.3	2.6	2.4	1.7
Parsnips	0.1	*	*	0.1	0.4	0.1	*	*
Spinach	0.2	0.2	0.7	*	0.6	0.3	0.3	0.7
Sub-Total D	7.7	6.0	7.9	6.7	9.4	9.3	8.6	8.3
E. Turnips	*	0.1	-	*	0.2	0.3	0.2	*
Sub-Total D & E	7.7	6.1	7.9	6.7	9.6	9.6	8.8	8.3
Total A,B,C,D & E	45.1	53.1	51.4	58.7	83.3	77.8	61.0	50.9
Total B,C,D & E	35.0	46.9	42.3	44.2	58.1	40.1	53.0	43.6
Total C,D & E	27.1	33.2	32.2	32.8	43.5	30.0	39.1	33.3
Total C & D	27.1	33.1	32.2	32.8	43.3	29.7	38.8	33.3

(a) Excludes Seed Potatoes.

Source: Derived from Statistics Canada and Agriculture Canada data.

Vegetables: Volume of Fresh Exports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
Carrots (a)	41,500	55,054	53,583	41,328	42,640	59,419	49,869	49,368
Lettuce	1,489	..	..	..	..	..	..	..
Onions	50,932	43,370	34,762	33,520	28,213	17,437	28,750	28,536
Potatoes (b)	381,413	375,046	269,761	275,281	225,810	283,692	330,927	277,095
Tomatoes	1,608	1,924	1,899	1,506	1,103	898	899	1,261
Turnips	90,825	84,392	88,838	79,125	81,350	80,640	81,824	82,355
Fresh or Chilled, n.e.s. (c)	10,541	16,880	23,516	21,564	19,966	17,533	20,601	20,636
Total	578,309	576,666	472,359	452,324	399,082	459,619	512,870	459,251

(a) Included in Fresh or Chilled, n.e.s. for 1966-70 and 1971-75.

(b) Included in Fresh or Chilled, n.e.s. for 1961.

(c) Includes Artichoke leaves, Chicory, Sweet Corn, Cucumbers, Lettuce, Peas and Rhubarb for all years except Lettuce for 1961-65 and includes Tomatoes for 1961.

Source: Statistics Canada.

## Vegetables: Value of Fresh Exports, by Commodity, 1961-1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand dollars -				
Carrots (a)	1,696	2,363	2,460	2,188	1,864	3,155	2,707	2,475
Lettuce	77	..	..	..	..	..	..	..
Onions	1,854	1,870	1,589	1,639	3,057	1,621	2,493	2,080
Potatoes	9,791	11,067	7,272	8,308	12,004	18,793	19,112	13,098
Tomatoes	229	341	477	291	222	189	212	278
Turnips	2,231	2,651	2,817	3,576	4,551	4,910	5,581	4,287
Fresh or Chilled, n.e.s. (c)	493	1,038	1,540	1,111	1,363	1,478	1,741	1,447
Total	16,370	19,330	16,155	17,113	23,061	30,146	31,846	23,664

(a) Included in Fresh or Chilled, n.e.s. for 1966-70 and 1971-75.

(b) Included in Fresh or Chilled, n.e.s. for 1961.

(c) Includes Artichoke leaves, Chicory, Sweet Corn, Cucumbers, Lettuce, Peas and Rhubarb for all years except Lettuce for 1961-65, and includes Tomatoes for 1961.

Source: Statistics Canada.

Vegetables: Exports as a Percentage of Farm Value and  
Volume of Production, by Commodity, Average  
1961-65, 1966-70 and 1971-75

	Farm Value			Volume of Production		
	<u>1961-65</u>	<u>1966-70</u>	<u>1971-75</u>	<u>1961-65</u>	<u>1966-70</u>	<u>1971-75</u>
	- per cent -					
Carrots	26.8	32.5	23.3	13.4	16.0	13.1
Lettuce <sup>(a)</sup>	3.0	..	..	2.6	..	..
Onions	33.3	28.2	18.8	22.8	20.1	14.0
Potatoes	10.4	12.0	7.4	8.3	7.2	5.7
Tomatoes <sup>(b)</sup>	1.2	1.6	1.0	0.2	0.3	0.2
Turnips	42.4	48.5	63.6	22.7	29.9	40.6
Fresh or Chilled, n.e.s. <sup>(c)</sup>	..	..	..	..	..	..
Total	10.2	11.2	8.0	7.9	7.2	5.9

(a) Included in Fresh or Chilled n.e.s., for 1966-70 and 1971-75.

(b) Included in Fresh or Chilled n.e.s., for 1961.

(c) Includes Artichoke leaves, Chicory, Sweet Corn, Cucumbers, Lettuce, Peas and Rhubarb for all years; except Lettuce for 1961-65; and, includes Tomatoes for 1961.

Source: Appendix Tables 9, 13, 36 and 37.

Vegetables: Percentage Distribution of Fresh Vegetable  
Exports, by Region of Export<sup>(b)</sup>, by Commodity,  
Average 1972-75

	<u>Maritimes</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>
	- per cent -				
Carrots	0.2	30.4	69.1	0.3	0.1
Onions <sup>(a)</sup>	17.5 <sup>(b)</sup>	27.9	54.2	0.1	0.4
Potatoes, Fresh	52.0	9.6	12.2	23.3	3.0
Potatoes, Seed	89.5	4.0	3.8	0.7	2.2
Tomatoes	2.5	3.5	91.2	0.2	2.5
Turnips	4.9	0.9	93.8	0.4	*
Fresh and Chilled, n.e.s. <sup>(c)</sup>	..	..	..	..	..
Total	52.0	8.9	32.6	4.9	1.6

(a) Includes a minor volume of onion sets and shallots.

(b) Export data are recorded by Port of Shipment. The exports indicated reflect trans-shipments of produce by Ontario and Quebec growers.

(c) Fresh and Chilled, n.e.s. exports are not available on a regional basis.

Source: Derived from Statistics Canada data.



Vegetables: Per Capita Consumption of Fresh and Processed Vegetables, by Commodity,  
Average 1961-65, 1966-70 and 1971-74

	Fresh Vegetables			Processed Vegetables (a)			Total Vegetables		
	1961-65	1966-70	1971-74	1961-65	1966-70	1971-74	1961-65	1966-70	1971-74
	- pounds -								
A. Potatoes	123.35	110.82	90.92	29.92	55.21	62.69	153.27	166.02	153.61
B. Peas	0.03	0.02	0.03	6.46	6.19	6.27	6.49	6.21	6.30
Sweet Corn	4.60	4.45	4.30	15.60	16.28	16.30	20.20	20.74	20.60
Tomatoes	16.30	15.49	14.55	44.65	45.31	51.83	60.94	60.80	66.38
Snap Beans	1.34	1.21	1.19	2.76	3.38	3.60	4.09	4.59	4.79
Sub-Total B	22.26	21.17	20.07	69.46	71.16	78.00	91.73	92.33	98.07
C. Carrots	15.43	14.80	13.00	2.98	3.22	4.68	18.41	18.02	17.68
Celery	7.41	7.40	7.78	0.32	0.31	0.37	7.74	7.70	8.15
Lettuce	13.10	14.73	16.96	-	-	-	13.10	14.73	16.96
Onions	11.37	11.38	11.04	0.27	0.22	0.29	11.63	11.59	11.33
Sub-Total C	47.30	48.30	48.78	3.57	3.74	5.34	50.88	52.04	54.12
D. Asparagus	0.31	0.26	0.28	0.38	0.36	0.49	0.69	0.62	0.77
Beets	1.46	0.78	0.50	1.26	1.24	1.45	2.73	2.01	1.94
Cabbage	10.07	10.67	11.59	0.65	0.68	0.91	10.72	11.34	12.50
Cauliflower	2.22	2.03	1.99	0.25	0.33	0.30	2.48	2.36	2.29
Cucumbers	3.46	3.67	3.87	3.55	5.27	4.93	7.01	8.94	8.80
Parsnips	0.82	0.64	0.55	-	-	-	0.82	0.64	0.55
Spinach	0.83	0.62	0.63	0.26	0.25	0.29	1.10	0.87	0.92
Sub-Total D	19.17	18.66	19.40	6.36	8.12	8.37	25.53	26.78	27.76
E. Turnips	16.51	9.39	5.63	0.07	0.12	0.09	16.58	9.51	5.72

Vegetables: Per Capita Consumption of Fresh and Processed Vegetables, by Commodity,  
Average 1961-65, 1966-70 and 1971-74

	Fresh Vegetables			Processed Vegetables (a)			Total Vegetables		
	1961-65	1966-70	1971-74	1961-65	1966-70	1971-74	1961-65	1966-70	1971-74
	pounds -			pounds -			pounds -		
F.									
Broccoli	..	0.78	1.22	..	0.25	0.28	..	1.03	1.51
Brussels Sprouts	..	0.40	0.41	..	0.19	0.28	..	0.58	0.69
Eggplant	..	0.27	0.37	..	-	-	..	0.27	0.37
Endive	..	..	0.44	..	..	-	..	..	0.44
Mushrooms	0.45	0.52	0.89	0.65	0.89	1.85	1.09	1.41	2.74
Parsley	..	0.17	0.21	..	0.02	0.02	..	0.18	0.23
Peppers	1.33	1.83	2.44	0.14	0.17	0.19	1.47	2.00	2.63
Radishes	..	..	1.43	..	..	-	..	..	1.43
Rhubarb	..	0.26	0.20	..	0.06	0.07	..	0.32	0.26
Shallots	..	..	1.53	..	..	0.10	..	..	1.63
Sub-Total F	1.78	4.22	9.14	0.78	1.57	2.80	2.56	5.79	11.94
Total A,B,C,D,E & F	230.37	212.56	193.93	110.17	139.92	157.29	340.54	352.48	351.22
Total A,B,C,D & E	228.60	208.34	184.79	109.39	138.35	154.49	337.98	346.69	339.28
Total B,C,D & E	105.25	97.53	93.87	79.47	83.14	91.80	184.72	180.67	185.67
Total C,D & E	82.98	76.35	73.80	10.00	11.98	13.80	92.99	88.33	87.60
Total C & D	66.48	66.96	68.17	9.93	11.86	13.71	76.41	78.82	81.88

(a) Processed imports converted to fresh equivalent.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Consumption of Fresh Market Vegetables,  
Average 1961-65, 1966-70 and 1971-74

		From Domestic Production	(a) From Imports	Total	Imports as % of Total
		- million pounds -			per cent
A. Potatoes <sup>(b)</sup>	1961-65	2,214	122	2,336	5.2
	1966-70	2,170	121	2,291	5.3
	1971-74	1,874	125	1,999	6.2
B. Main Processing Vegetables	1961-65	225	196	422	46.5
	1966-70	204	234	438	53.4
	1971-74	179	263	441	59.5
C. Main Organic Soil Vegetables	1961-65	465	431	896	48.1
	1966-70	478	520	999	52.1
	1971-74	486	587	1,072	54.7
D. Other Vegetables	1961-65	559	117	676	17.3
	1966-70	444	136	580	23.4
	1971-74	366	184	550	33.4
Total A,B,C & D	1961-65	3,463	866	4,329	20.0
	1966-70	3,297	1,011	4,308	23.5
	1971-74	2,905	1,158	4,063	28.5

(a) Includes greenhouse production for cucumbers and tomatoes.

(b) Excludes shrinkage.

Source: Derived from Agriculture Canada and Statistics Canada data.

Vegetables: Consumption of Fresh Vegetables in Processed Form, <sup>(a)</sup>  
Average 1961-65, 1966-70 and 1971-74

		<u>From Domestic Production</u>	<u>From Imports</u>	<u>Total</u>	<u>Imports as % of Total</u>
		- million pounds -			per cent
A. Potatoes	1961-65	468	99	567	17.5
	1966-70	972	169	1,142	14.8
	1971-74	1,204	175	1,378	12.7
B. Main Processing Vegetables	1961-65	1,122	193	1,315	14.7
	1966-70	1,157	315	1,472	21.4
	1971-74	1,284	431	1,715	25.1
C. Main Organic Soil Vegetables	1961-65	64	3	68	4.8
	1966-70	66	11	77	14.7
	1971-74	92	26	117	22.0
D. Other Vegetables	1961-65	99	23	122	18.6
	1966-70	147	24	170	13.9
	1971-74	163	23	186	12.5
Total A,B,C & D	1961-65	1,754	318	2,071	15.3
	1966-70	2,342	519	2,861	18.1
	1971-74	2,742	654	3,397	19.3

(a) Processed imports converted to fresh equivalent.

Source: Derived from Agriculture Canada and Statistics Canada data.

Canadian Trade Balance on Fresh Vegetables<sup>(a)</sup>, 1946-1975

<u>Year</u>	<u>Exports</u>	<u>Imports</u>	<u>Trade Balance</u>
- thousand dollars -			
1946	9,630	25,748	- 16,118
1947	18,289	18,978	- 689
1948	14,665	6,845	+ 7,820
1949	14,914	18,460	- 3,546
1950	11,369	23,259	- 11,890
1951	10,744	26,295	- 15,551
1952	12,401	37,969	- 25,568
1953	12,465	29,250	- 16,785
1954	8,067	33,028	- 24,961
1955	8,252	38,852	- 30,600
1956	12,383	43,694	- 31,311
1957	9,580	41,614	- 32,034
1958	10,894	43,429	- 32,535
1959	9,131	43,286	- 34,155
1960	9,591	49,435	- 39,844
1961	10,507	48,003	- 37,496
1962	14,865	55,691	- 40,826
1963	15,063	54,481	- 39,418
1964	18,605	60,105	- 41,500
1965	22,581	67,637	- 45,056
1966	17,336	74,901	- 57,565
1967	19,476	76,662	- 57,186
1968	16,700	86,590	- 69,890
1969	21,297	90,649	- 69,352
1970	21,841	95,552	- 73,711
1971	16,155	100,789	- 84,634
1972	17,113	114,449	- 97,336
1973	23,061	150,526	-127,465
1974	30,146	163,741	-133,595
1975	31,846	194,080	-162,234

(a) Calendar year basis.

Source: Statistics Canada.

Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
Tree Fruits					
Apples					
California	6,080,600	5,870,000	6,225,000	6,484,000	6,164,900
Oregon	400,000	530,000	490,000	440,000	465,000
Washington	125,000	105,000	167,000	165,000	140,500
Other States	1,200,000	1,390,000	1,860,000	1,806,000	1,564,000
Illinois	4,355,600	3,845,000	3,708,000	4,073,000	3,995,400
Massachusetts	103,000	100,000	83,000	79,000	91,250
Michigan	105,000	91,000	76,000	91,000	90,750
New Jersey	700,000	730,000	470,000	670,000	642,500
New York	110,000	88,000	100,000	120,000	104,500
North Carolina	925,000	770,000	720,000	889,000	826,000
Ohio	185,000	245,000	210,000	295,000	233,750
Pennsylvania	150,000	135,000	100,000	132,000	129,250
Virginia	505,000	400,000	500,000	480,000	471,250
West Virginia	480,000	420,000	400,000	378,400	419,600
Other	250,000	215,000	225,000	210,000	225,000
	842,600	651,000	824,000	728,600	761,550
Pears					
California	1,413,840	1,216,660	1,447,280	1,474,280	1,388,015
Oregon	618,000	591,200	654,600	621,800	621,400
Washington	358,000	220,000	342,000	350,000	317,500
Other States	330,800	306,000	374,600	426,600	359,500
Michigan	107,040	99,460	76,080	75,880	89,615
New York	37,000	45,000	19,000	21,000	30,500
Other	36,000	37,000	25,200	28,000	31,550
	34,040	17,460	31,880	26,880	27,565



## Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
Plums and Prune Plums	1,118,000	705,420	1,553,000	1,309,320	1,171,435
California	988,000	621,660	1,419,900	1,174,920	1,051,120
Oregon	33,400	16,800	51,600	56,000	39,450
Washington	31,000	24,800	29,400	42,200	31,850
Other States	65,600	42,160	52,100	36,200	49,015
Michigan	40,000	28,000	36,000	24,000	32,000
Other	25,600	14,160	16,100	12,200	17,015
Peaches	2,740,900	2,288,500	2,442,900	2,740,700	2,553,250
California	1,560,000	1,456,000	1,552,000	1,908,000	1,619,000
Oregon	14,000	7,000	12,000	11,000	11,000
Washington	40,500	27,500	43,000	27,300	34,575
Other States	1,126,400	798,000	835,900	794,400	888,675
Georgia	120,000	190,000	100,000	45,000	113,750
Michigan	82,000	10,000	50,000	70,000	53,000
New Jersey	125,000	25,000	92,000	91,000	83,250
Pennsylvania	105,000	80,000	81,000	120,000	96,500
South Carolina	290,000	220,000	245,000	215,000	242,500
Other	404,400	273,000	267,900	253,400	299,675
Apricots	299,100	254,940	315,380	187,100	264,130
California	288,000	252,000	304,000	182,000	256,500
Oregon	-	-	-	-	-
Washington	4,700	2,940	7,040	4,000	4,670
Other States	6,400	-	4,340	1,100	2,960

Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
Cherries (sweet)	279,980	190,080	307,260	287,100	266,105
California	64,000	40,000	80,000	56,000	60,000
Oregon	65,400	38,400	74,000	67,000	61,200
Washington	67,800	42,400	91,000	90,000	72,800
Other States	82,780	69,280	62,260	74,100	72,105
Michigan	47,000	56,000	32,000	51,000	46,500
New York	13,000	9,000	6,800	3,200	8,000
Other	22,780	4,280	23,460	19,900	17,605
Cherries (sour)	278,520	268,360	174,040	264,600	246,380
California	-	-	-	-	-
Oregon	10,000	1,800	7,200	4,200	5,800
Washington	-	-	-	-	-
Other States	268,520	266,560	166,840	260,400	240,580
Michigan	178,000	214,000	116,000	206,000	178,500
New York	41,000	29,200	20,400	16,200	26,700
Pennsylvania	15,200	11,100	6,300	13,100	11,425
Utah	13,400	1,300	17,000	11,600	10,825
Wisconsin	16,700	9,160	4,800	10,400	10,265
Other	4,220	1,800	2,340	3,100	2,865
Total Tree Fruits	12,210,940	10,793,960	12,464,860	12,747,100	12,054,215
California	3,918,000	3,490,860	4,500,500	4,382,720	4,073,020
Oregon	605,800	389,000	653,800	653,200	575,450
Washington	1,674,800	1,793,640	2,405,040	2,396,100	2,067,395
Other States	6,012,340	5,120,460	4,905,520	5,315,080	5,338,350
Michigan	1,084,000	1,083,000	723,000	1,042,000	983,000
Others	4,928,340	4,037,460	4,182,520	4,273,080	4,355,350

Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
<u>Small Fruits</u>					
Strawberries	520,900	458,300	477,300	533,200	497,425
California	303,000	284,700	320,000	382,700	322,600
Oregon	83,200	54,200	48,400	41,000	56,700
Washington	26,700	24,300	21,600	22,700	23,825
Other States	108,000	95,100	87,300	86,800	94,300
Michigan	25,000	21,200	15,000	17,700	19,725
Florida	17,600	20,000	18,900	17,600	18,525
Other	65,400	53,900	53,400	51,500	56,050
<u>Raspberries &amp; Loganberries</u>					
California	30,222	26,288	27,174	25,343	27,257
Oregon	-	-	-	-	-
Washington	16,610	14,224	13,533	13,893	14,565
Other States	13,612	12,064	13,641	11,450	12,692
	-	-	-	-	-
<u>Blueberries</u>					
California	2,795	3,519	5,180	4,170	3,916
Oregon	-	-	-	-	-
Washington	-	-	-	-	-
Other States	2,795	3,519	5,180	4,170	3,916
	-	-	-	-	-
<u>Cranberries</u>					
California	163,980	197,600	201,430	223,600	196,653
Oregon	-	-	-	-	-
Washington	6,880	10,400	9,730	9,200	9,053
Other States	10,400	14,800	11,800	9,200	11,550
Massachusetts	146,700	172,400	179,900	205,200	176,050
New Jersey	73,700	81,900	90,100	93,200	84,725
Wisconsin	17,800	19,600	22,800	25,000	21,300
	55,200	70,900	67,000	87,000	70,025

Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
Grapes	7,993,440	5,139,300	8,386,300	8,383,000	7,475,510
California	7,068,000	4,532,000	7,774,000	7,574,000	6,737,000
Oregon	-	-	-	-	-
Washington	158,800	124,200	138,400	161,000	145,600
Other States	766,640	483,100	473,900	648,000	592,910
Michigan	138,000	106,000	47,000	95,000	96,500
New York	400,000	206,000	256,000	354,000	304,000
Pennsylvania	114,000	75,200	80,000	106,000	93,800
Others	114,640	95,900	90,900	93,000	98,610
Blackberries	30,080	28,916	8,716	29,260	24,243
California	-	-	-	-	-
Oregon	27,880	27,600	8,060	28,000	22,885
Washington	2,200	1,316	656	1,260	1,358
Other States	-	-	-	-	-
Total Small Fruits	8,741,417	5,853,923	9,106,100	9,198,573	8,225,003
California	7,371,000	4,816,700	8,094,000	7,956,700	7,059,600
Oregon	134,570	106,424	79,723	92,093	103,203
Washington	214,507	180,199	191,277	209,780	198,941
Other States	1,021,340	750,600	741,100	940,000	863,260
Michigan	163,000	127,200	62,000	112,700	116,225
Others	858,340	623,400	679,100	827,300	747,035

Fruits: United States Production by Commodity and by Major State, 1971 to 1974

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>Average 1971-74</u>
	- thousand pounds -				
Total Tree Fruits & Small Fruits	20,952,357	16,647,883	21,570,960	21,945,673	20,279,218
California	11,289,000	8,307,560	12,594,500	12,339,420	11,132,620
Oregon	740,370	495,424	733,523	745,293	678,653
Washington	1,889,307	1,973,839	2,596,317	2,605,880	2,266,336
Other States	7,033,680	5,871,060	5,646,620	6,255,080	6,201,610
Michigan	1,247,000	1,210,200	785,000	1,154,700	1,099,225
Others	5,786,680	4,660,860	4,861,620	5,100,380	5,102,385
	- percentage distribution -				
Total Tree Fruits & Small Fruits	100.0	100.0	100.0	100.0	100.0
California	53.9	49.9	58.4	56.2	54.9
Oregon	3.5	3.0	3.4	3.4	3.3
Washington	9.0	11.9	12.0	11.9	11.2
Other States	33.6	35.3	26.2	28.5	30.6
Michigan	6.0	7.3	3.6	5.3	5.4
Others	27.6	28.0	22.5	23.2	25.2

Source: U.S. Department of Agriculture.

Fruits: Number of Trees and Number of Acres, by Commodity, by Region, 1961 and 1971

Tree Fruits	1971 Acres	Number of Trees		% Change 1961-1971	Share of Canadian Total		Share of Regional Total	
		1961	1971		1961	1971	1961	1971
		- per cent -						
Atlantic Region								
Apples	13,266	710,869	818,628	+ 15.2	14.8	12.2	90.3	91.3
Pears	658	46,382	50,851	+ 9.6	3.9	4.7	5.9	5.7
Plums and Prune Plums	217	11,796	14,613	+ 23.9	2.1	3.6	1.5	1.6
Cherries (Sweet)	44	2,964	2,140	- 27.8	0.8	0.5	0.4	0.2
Cherries (Sour)	42	2,173	2,662	+ 22.5	0.6	0.6	0.3	0.3
Peaches	84	13,085	7,066	- 46.0	0.7	0.4	1.6	0.8
Apricots	3	62	339	+446.8	*	0.4	*	*
Total	14,314	787,331	896,299	+ 13.8	8.4	8.4	100.0	100.0
Quebec								
Apples	23,598	1,252,076	1,235,543	- 1.3	26.1	18.5	97.0	98.0
Pears	130	4,880	6,366	+ 30.5	0.4	0.6	0.4	0.5
Plums and Prune Plums	244	24,179	14,450	- 40.2	4.3	3.5	1.9	1.1
Cherries (Sweet)	71	8,008	3,686	- 54.0	2.2	0.9	0.6	0.3
Cherries (Sour)	20	1,891	1,057	- 44.1	0.5	0.3	0.1	0.1
Peaches	2	74	26	- 64.9	*	*	*	*
Apricots	1	193	28	- 85.5	0.1	*	*	*
Total	24,066	1,291,301	1,261,156	- 2.3	13.8	11.7	100.0	100.0



Fruits: Number of Trees and Number of Acres, by Commodity, by Region, 1961 and 1971

Tree Fruits	Share of Canadian			% Change 1961-1971	Share of Regional Total		
	1971 Acres	Total			1961	1971	
		1961	Number of Trees			per cent	per cent
Ontario							
Apples	33,419	1,371,205	1,935,893	+ 41.2	28.6	29.0	30.2
Pears	7,111	729,778	686,627	- 5.9	61.7	62.8	16.0
Plums and Prune Plums	2,657	369,350	245,777	- 33.5	66.1	59.8	8.1
Cherries (Sweet)	2,385	161,032	189,126	+ 17.4	43.7	46.6	3.5
(Sour)	3,959	367,662	360,172	- 2.0	94.2	89.5	8.1
Peaches	13,121	1,531,079	1,390,999	- 9.1	81.0	83.2	33.7
Apricots	202	18,794	24,898	+ 32.5	11.6	28.3	0.4
Total	62,854	4,548,900	4,833,492	+ 6.3	48.7	44.9	100.0
Prairie Region							
Apples	387	45,029	42,149	- 6.4	0.9	0.6	62.4
Pears	29	1,649	3,582	+117.2	0.2	0.3	2.3
Plums and Prune Plums	109	18,266	11,827	- 35.3	3.3	2.9	25.3
Cherries (Sweet)	30	3,095	2,396	- 22.6	0.8	0.6	4.3
(Sour)	39	2,885	5,889	+104.1	0.7	1.5	4.0
Peaches	1	29	59	+103.4	*	*	*
Apricots	8	1,178	667	- 43.4	0.7	0.8	1.7
Total	603	72,131	66,569	- 7.7	0.8	0.6	100.0

Fruits: Number of Trees and Number of Acres, by Commodity, by Region, 1961 and 1971

Tree Fruits	1971 Acres	Number of Trees		% Change 1961-1971	Share of Canadian Total		Share of Regional Total	
		1961	1971		1961	1971	1961	1971
		-			-		-	
British Columbia								
Apples	21,622	1,417,776	2,655,029	+ 87.3	29.6	39.7	53.5	71.7
Pears	3,550	399,330	346,057	- 13.3	33.8	31.6	15.1	9.3
Plums and Prune Plums	1,415	135,196	124,192	- 8.1	24.2	30.2	5.1	3.4
Cherries (Sweet)	2,794	193,088	208,424	+ 7.9	52.5	51.4	7.3	5.6
(Sour)	384	15,567	32,708	+110.1	4.0	8.1	0.6	0.9
Peaches	2,330	346,884	273,183	- 21.2	18.3	16.4	13.1	7.4
Apricots	768	142,229	61,916	- 56.5	87.6	70.5	5.3	1.7
Total	32,863	2,650,070	3,701,509	+ 39.7	28.3	34.4	100.0	100.0
Canada (a)								
Apples	92,292	4,796,955	6,687,242	+ 39.4	100.0	100.0	51.3	62.2
Pears	11,478	1,182,019	1,093,483	- 7.5	100.0	100.0	12.7	10.2
Plums and Prune Plums	4,642	558,787	410,859	- 26.5	100.0	100.0	6.0	3.8
Cherries (Sweet)	5,324	368,187	405,772	+ 10.2	100.0	100.0	3.9	3.8
(Sour)	4,444	390,178	402,488	+ 3.2	100.0	100.0	4.2	3.7
Peaches	15,538	1,891,151	1,671,333	- 11.6	100.0	100.0	20.2	15.5
Apricots	982	162,456	87,848	- 45.9	100.0	100.0	1.7	0.8
Total	134,700	9,349,733	10,759,025	+ 15.1	100.0	100.0	100.0	100.0

Fruits: Number of Trees and Number of Acres, by Commodity, by Region, 1961 and 1971

	Number of Acres		% Change 1961-1971	Share of Canadian Total		Share of Regional Total	
	1961	1971		1961	1971	1961	1971
				-	per cent	-	
<u>Small Fruits</u>							
Atlantic Region							
Strawberries	1,949	1,749	- 10.3	14.9	13.7	14.8	16.1
Raspberries	85	96	+ 12.9	1.5	2.2	0.6	0.9
Grapes	1	5	+400.0	*	*	*	*
Others	11,133	9,016	- 19.0	86.1	66.2	84.6	83.0
Total	13,168	10,866	- 17.5	24.1	19.7	100.0	100.0
Quebec							
Strawberries	4,296	4,571	+ 6.4	32.9	35.7	70.2	63.5
Raspberries	1,321	881	- 33.3	23.0	20.6	21.6	12.2
Grapes	11	4	- 63.6	0.1	*	0.2	0.1
Others	487	1,744	+258.1	3.8	12.8	8.0	24.2
Total	6,115	7,200	+ 17.7	11.2	13.1	100.0	100.0
Ontario							
Strawberries	4,381	3,653	- 16.6	33.6	28.6	15.0	13.6
Raspberries	2,510	983	- 60.8	43.7	22.9	8.6	3.7
Grapes	22,161	22,094	- 0.3	97.1	90.2	75.9	82.1
Others	157	173	+ 10.2	1.2	1.3	0.5	0.6
Total	29,209	26,903	- 7.9	53.6	48.7	100.0	100.0

Fruits: Number of Trees and Number of Acres, by Commodity, by Region, 1961 and 1971

	Number of Acres		% Change 1961-1971	Share of Canadian Total		Share of Regional Total	
	1961	1971		1961	1971	1961	1971
	-			-		-	
<u>Small Fruits</u>							
Prairie Region							
Strawberries	172	227	+ 32.0	1.3	1.8	43.4	58.7
Raspberries	207	147	- 29.0	3.6	3.4	52.3	38.0
Grapes	2	3	+ 50.0	*	*	0.5	0.7
Others	15	10	- 33.3	0.1	0.1	3.8	2.6
Total	396	387	- 2.3	0.7	0.7	100.0	100.0
British Columbia							
Strawberries	2,253	2,583	+ 14.6	17.3	20.2	39.9	26.2
Raspberries	1,616	2,180	+ 34.9	28.2	50.9	28.6	22.2
Grapes	645	2,406	+273.0	2.8	9.8	11.4	24.4
Others	1,137	2,673	+135.1	8.8	19.6	20.1	27.2
Total	5,651	9,842	+ 74.2	10.4	17.8	100.0	100.0
Canada (a)							
Strawberries	13,051	12,785	- 2.0	100.0	100.0	23.9	23.1
Raspberries	5,739	4,288	- 25.3	100.0	100.0	10.5	7.8
Grapes	22,820	24,512	+ 7.4	100.0	100.0	41.9	44.4
Others	12,929	13,616	+ 5.3	100.0	100.0	23.7	24.7
Total	54,539	55,201	+ 1.2	100.0	100.0	100.0	100.0

(a) Includes data for Yukon and Northwest Territories.

Source: Census of Canada 1961 and 1971.

Fruits: Percentage of Trees Under Five Years Old, 1961 and 1971

	1961					1971						
	Canada	Atlantic	Quebec	Ontario	Prairies	B.C.	Canada	Atlantic	Quebec	Ontario	Prairies	B.C.
Tree Fruits												
Apples	21.9 (a)	10.1 (a)	13.8 (a)	21.4 (a)	35.7 (a)	35.1 (a)	37.3	24.3	23.0	36.3	72.0	48.1
Pears	30.6	17.9	71.3	25.3	81.9	41.1	20.1	20.2	40.9	21.3	82.3	16.8
Plums and prune plums	14.6	27.7	30.4	11.6	62.2	12.2	27.4	47.3	20.6	19.7	75.2	36.6
Cherries (sweet)	32.0	26.8	39.3	22.7	77.9	38.9	24.7	27.9	51.4	21.7	75.0	26.4
Cherries (sour)	25.8	15.6	14.4	24.5	39.6	54.4	23.6	17.4	41.6	22.1	71.8	31.3
Peaches	30.6	27.3	36.5	30.5	62.1	31.2	38.7	33.5	53.8	38.6	5.1	39.3
Apricots	16.5	22.6	92.2	36.7	50.8	13.4	36.3	21.2	100.0	78.2	29.2	19.6
Total	24.8	11.1	14.5	24.7	45.7	33.5	34.4	24.5	23.2	32.6	72.7	42.3

(a) Trees under 10 years.

Source: Table 1 and Appendix Table 45.

Fruits: Number of "Census Farms," by Commodity, 1961 and 1971

	<u>1961</u>	<u>1971</u>	<u>Absolute Change 1961 to 1971</u>
<u>Tree Fruits</u> (a)			
Apples	17,282	9,686	- 7,596
Pears	10,432	5,986	- 4,446
Plums and prune plums	10,011	5,219	- 4,792
Cherries (sweet)	8,510	5,093	- 3,417
(sour)	5,517	3,125	- 2,392
Peaches	6,032	3,799	- 2,233
Apricots	3,129	1,912	- 1,217
Sub-total (b)	(60,913)	(34,820)	-26,093
<u>Small Fruits</u>			
Strawberries	11,194	5,299	- 5,895
Raspberries	6,424	2,983	- 3,441
Grapes	2,580	1,812	- 768
Other	1,109	831	- 278
Sub-total (b)	(21,307)	(10,925)	(-10,382)
Total (b)	(82,220)	(45,745)	(-36,475)

(a) On farms having 25 or more fruit trees.

(b) Figures in brackets are for use in calculating averages only.  
The number of farms are not additive because one farm may be  
producing more than one type of fruit.

Source: Census of Canada, 1961 and 1971.



Fruits: Average Size of Farm, by Region, 1961 and 1971

Average Size of Farms						
	Trees/Farm			Acres/Farm		
	1961	1971	% Change	1961	1971	% Change
			1961-71			1961-71
<u>Tree Fruits</u> (a)						
Atlantic	396	1,009	+154.8	7.9	16.1	+103.8
Quebec	270	617	+128.5	5.4	11.8	+118.5
Ontario	567	990	+ 74.6	8.6	12.9	+ 50.0
Prairies	187	301	+ 61.0	2.0	2.7	+ 35.0
British Columbia	605	1,171	+ 93.6	8.5	10.4	+ 22.4
Canada	478	96	+101.0	7.6	12.0	+ 57.9
	Acres per Farm					
	1961	1971	% Change			1961-71
<u>Small Fruits</u>						
Atlantic Region						
Strawberries		1.0		2.6		+160.0
Raspberries		0.3		0.8		+166.7
Grapes		0.2		0.7		+250.0
Quebec						
Strawberries		1.0		2.1		+110.0
Raspberries		0.8		1.1		+ 37.5
Grapes		0.5		0.3		- 40.0
Ontario						
Strawberries		1.2		2.0		+ 66.7
Raspberries		0.9		1.0		+ 11.1
Grapes		9.2		14.3		+ 55.4
Prairies						
Strawberries		0.6		1.4		+133.3
Raspberries		0.6		0.8		+ 33.3
Grapes		0.7		0.4		- 42.9
British Columbia						
Strawberries		2.2		5.2		+136.4
Raspberries		1.1		2.5		+127.3
Grapes		4.3		10.2		+137.2
Canada						
Strawberries		1.2		2.4		+100.0
Raspberries		0.9		1.4		+ 55.6
Grapes		8.8		13.5		+ 53.4

(a) Farms reporting 25 or more fruit trees.

Source: Census of Canada, 1961 and 1971.

Fruits: Average Number of Trees and Acres per Farm, by Commodity, (a) 1961 and 1971

	1961				1971			
	Number of Trees or Acres		Average per Farm		Number of Farms		Average Trees or Acres per Farm	
	Number of Trees or Acres	of Farms	Number of Trees or Acres	per Farm	Number of Farms	of Farms	Average Trees or Acres per Farm	Average Acres per Farm (d)
<b>Tree Fruits (b)</b>								
Apples	4,796,955	17,282	6,687,242	277.6	9,686	9,686	690.4	9.5
Pears	1,182,019	10,432	1,093,483	113.3	5,986	5,986	182.7	1.9
Plums and prune plums	558,787	10,011	410,859	55.8	5,219	5,219	78.7	0.9
Cherries (sweet)	368,187	8,510	405,772	43.3	5,093	5,093	79.7	1.0
(sour)	390,178	5,517	402,488	70.7	3,125	3,125	128.8	1.4
Peaches	1,891,151	6,032	1,671,333	313.5	3,799	3,799	439.9	4.1
Apricots	162,456	3,129	87,848	51.9	1,912	1,912	45.9	0.5
Total	9,349,733	19,552	10,759,025	478.2	11,198	11,198	960.8	12.0
	acres							
<b>Small Fruits</b>								
Strawberries	13,051	11,194	..	1.2	5,299	5,299	..	2.4
Raspberries	5,739	6,424	..	0.9	2,983	2,983	..	1.4
Grapes	22,820	2,580	..	8.8	1,812	1,812	..	13.5
Other	12,929	1,109	..	11.8	831	831	..	16.4
Total (c)	54,539	(21,307)	..	2.6	(10,925)	(10,925)	..	5.1

(a) Includes data for Yukon and Northwest Territories.

(b) On farms having 25 or more fruit trees.

(c) Figures in brackets are for use in calculating averages only. The number of farms are not additive because one farm may be producing more than one type of fruit.

(d) Average acreage per farm by commodity was available for 1971 only.

Source: Table 1 and Appendix Table 47.

Fruits: Number of Trees or Acres per Farm, by Commodity, by Region, 1961 and 1971

	1961						1971					
	(a)			(a)			(a)			(a)		
	Canada	Atlantic	Quebec	Ontario	Prairies	B.C.	Canada	Atlantic	Quebec	Ontario	Prairies	B.C.
<b>Tree Fruits</b>							- trees -					
Apples	277.6	363.8	264.6	215.4	121.7	367.2	690.4	944.2	608.9	515.4	200.7	940.2
Pears	113.3	48.4	13.4	131.7	18.7	114.8	182.7	125.2	27.3	217.6	45.9	163.8
Plums and prunes	55.8	17.0	17.1	84.5	55.9	42.1	78.7	50.6	30.1	105.5	74.4	63.3
Cherries (sweet)	43.3	6.3	9.9	45.4	27.6	54.0	79.7	12.3	14.7	89.3	32.8	84.1
Cherries (sour)	70.7	7.3	9.7	93.3	33.5	15.6	128.8	20.3	13.6	166.3	101.5	47.3
Peaches	313.5	44.1	4.6	493.1	4.8	133.0	439.9	68.6	2.6	717.0	19.7	156.7
Apricots	51.9	4.1	16.1	22.8	18.1	64.3	45.9	33.9	5.6	39.8	23.0	49.8
Total	478.2	396.2	270.3	567.1	187.4	604.9	960.8	1,009.3	617.3	989.7	301.2	1,170.6
<b>Small Fruits</b>							- acres -					
Strawberries	1.2	1.0	1.0	1.2	0.6	2.2	2.4	2.6	2.1	2.0	1.4	5.2
Raspberries	0.9	0.3	0.8	0.9	0.6	1.1	1.4	0.8	1.1	1.0	0.8	2.5
Grapes	8.8	0.2	0.5	9.2	0.7	4.3	13.5	0.7	0.3	14.3	0.4	10.2
Other	11.7	23.5	8.9	1.1	0.8	2.7	16.4	30.5	19.8	1.8	0.6	8.0
Total	2.6	5.1	1.0	3.3	0.6	1.8	5.1	10.0	2.4	6.1	1.1	5.1

(a) Includes data for Yukon and Northwest Territories.

(b) On farms having 25 or more fruit trees.

Source: Census of Canada, 1961 and 1971.

Tree Fruits: Yield per Tree (a) and per Acre, Ontario and British Columbia, 1961-65 and 1971-75

	Ontario					(b)
	Average					
	Number of Trees		Acres	Production		
	1961	1971		1961-65	1971-75	
	- no. -	- no. -	- no. -	- '000 lb. -	- lbs./tree -	- lb./acre -
Apples (c)	1,077,964	1,232,436	33,419	251,694	264,900	7,926.6
Pears	545,346	540,661	7,111	46,050	38,096	5,357.3
Plums and prunes	326,349	197,266	2,657	16,670	9,788	3,683.9
Cherries (sweet)	124,495	148,091	2,385	10,690	6,875	2,882.6
Cherries (sour)	277,406	280,667	3,959	21,320	15,492	3,913.1
Peaches	1,063,510	854,424	13,121	98,690	83,534	6,366.4
Total	3,415,070	3,253,545	62,652	445,114	418,685	6,682.7
British Columbia						
	Average				(b)	
	Number of Trees		Acres	Production		
	1961	1971		1961-65		1971-75
		- no. -	- no. -	- no. -		- '000 lb. -
Apples (c)	920,735	1,378,234	21,622	288,944	272,682	12,611.3
Pears	235,033	288,064	3,550	30,910	41,633	11,727.6
Plums and prunes	118,690	78,736	1,415	12,480	9,632	6,807.1
Cherries (sweet)	118,042	153,467	2,794	8,650	14,808	5,299.9
Cherries (sour)	7,105	22,462	384	(e)	1,488	3,875.0
Peaches	238,535	165,942	2,330	23,030	26,826	11,513.3
Total	1,638,140	2,086,905	32,095	364,014	367,069	11,437.0

(a) Trees 5 years and over.

(b) May be understated due to use of commercial production only.

(c) Includes crabapples for British Columbia.

(d) Trees 10 years and over.

(e) Included with sweet cherries.

Source: Statistics Canada and Census of Canada, 1961 and 1971.

Fruits: Average Number of Trees per Acre, Tree Fruits,  
by Region, 1971

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	<u>Atlantic</u> <u>Region</u>	<u>Quebec</u>	<u>Ontario</u>	<u>Prairie</u> <u>Region</u>	<u>B.C.</u>	<u>Canada</u>
	- number -					
Apples	61.7	52.4	57.9	108.9	122.8	72.5
Pears	77.3	49.0	96.6	123.5	97.5	95.3
Plums and prunes	67.3	59.2	92.5	108.5	87.8	88.5
Cherries (sweet)	48.6	51.9	79.3	79.9	74.6	76.2
(sour)	63.4	52.9	91.0	151.0	85.2	90.6
Peaches	84.1	13.0	106.0	59.0	117.2	107.6
Apricots	113.0	28.0	123.3	83.4	80.6	89.5
Total	62.6	52.4	76.9	110.4	112.6	79.9

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Source: Appendix Table 45.

Fruits: Volume of Production by Commodity, by Region, (a) Annual Average 1961-65 and 1971-75

	Average Production		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Production of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- '000 lb. - - per cent -						
Atlantic Region							
Tree Fruits							
Apples	150,273	110,628	-26.4	87.5	82.1	16.3	12.4
Pears	2,530	3,180	+25.7	1.5	2.4	3.2	3.8
Plums and prunes	230	250	+ 8.7	0.1	0.2	0.8	1.3
Sub-total	153,033	114,058	-25.5	89.1	84.6	12.7	9.9
Small Fruits							
Strawberries	6,400	4,757	-25.7	3.7	3.5	20.0	13.7
Raspberries and loganberries	107	77	-28.0	0.1	0.1	0.6	0.5
Blueberries	12,075	15,647	+29.6	7.0	11.6	60.8	57.6
Cranberries	208	248	+19.2	0.1	0.2	21.3	2.4
Sub-total	18,790	20,729	+10.3	10.9	15.4	10.6	8.7
Total	171,823	134,787	-21.6	100.0	100.0	12.4	9.7
Quebec							
Tree Fruits							
Apples	232,524	245,364	+ 5.5	94.7	94.0	25.3	27.5
Sub-total	232,524	245,364	+ 5.5	94.7	94.0	19.3	21.3
Small Fruits							
Strawberries	6,158	8,068	+31.0	2.5	3.1	19.2	23.3
Raspberries and loganberries	1,545	763	-50.6	0.6	0.3	8.4	5.2
Blueberries	5,308	6,744	+27.1	2.2	2.6	26.7	24.8
Sub-total	13,011	15,575	+19.7	5.3	6.0	7.3	6.5
Total	245,535	260,939	+ 6.3	100.0	100.0	17.7	18.7



Fruits: Volume of Production by Commodity, by Region, (a) Annual Average 1961-65 and 1971-75

	Average Production		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Production of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- '000 lb. -			- per cent -			
<u>Ontario</u>							
Tree Fruits							
Apples	251,694	264,901	+ 5.2	44.5	46.8	27.4	29.6
Pears	46,050	38,097	-17.3	8.1	6.7	57.9	45.9
Plums and prunes	16,670	9,788	-41.3	2.9	1.7	56.7	49.8
Peaches	98,690	83,534	-15.4	17.5	14.8	81.1	75.7
Cherries (sweet)	10,690	6,874	-35.7	1.9	1.2	55.3	31.7
Cherries (sour)	21,320	15,493	-27.3	3.8	2.7	100.0	91.2
Sub-total	445,114	418,687	- 5.9	78.7	74.0	37.0	36.3
Small Fruits							
Strawberries	8,513	12,154	+42.8	1.5	2.1	26.6	35.1
Raspberries and loganberries	3,014	1,036	-65.6	0.5	0.2	16.5	7.1
Grapes	102,535	131,844	+28.6	18.1	23.3	96.7	86.7
Sub-total	114,062	145,034	+27.2	20.2	25.6	64.3	60.7
Other Fruits							
Cantaloupes	6,083	2,084	-65.7	1.1	0.4	100.0	100.0
Total	565,259	565,805	+ 0.1	100.0	100.0	40.8	40.6

Fruits: Volume of Production by Commodity, by Region, (a) Annual Average 1961-65 and 1971-75

	Average Production		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Production of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- '000 lb. -			- per cent -			
British Columbia							
Tree Fruits							
Apples	285,628	272,681	- 4.5	70.9	63.2	31.0	30.5
Pears	30,910	41,634	+ 34.7	7.7	9.6	38.9	50.2
Plums and prunes	12,480	9,631	-	3.1	2.2	42.5	49.0
Peaches	23,030	26,825	+ 16.5	5.7	6.2	18.9	24.3
Apricots	10,627	7,012	+ 34.0	2.6	1.6	100.0	100.0
Cherries (sweet).	8,650	14,808	+ 71.2	2.1	3.4	44.7	68.3
(sour)	(b)	1,489	..	..	0.3	..	8.8
Sub-total	371,325	374,080	+ 0.7	92.1	86.6	30.9	32.5
Small Fruits							
Strawberries	10,953	9,684	- 11.6	2.7	2.2	34.2	27.9
Raspberries and loganberries	13,637	12,764	- 6.4	3.4	3.0	74.5	87.2
Blueberries	2,468	4,794	+ 94.2	0.6	1.1	12.4	17.6
Blackberries	347	84	- 75.8	0.1	*	100.0	100.0
Cranberries	770	10,187	+1,223.0	0.2	2.4	78.7	97.6
Grapes	3,479	20,152	+ 479.2	0.9	4.7	3.3	13.3
Sub-total	31,654	57,665	+ 82.2	7.9	13.4	17.8	24.1
Total	402,979	431,745	+ 7.1	100.0	100.0	29.1	31.0

Fruits: Volume of Production by Commodity, by Region, (a) Annual average 1961-65 and 1971-75

Canada	Average Production		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Production of Similar Fruits
	1961-65	1971-75		1961-65	1971-75	
	- '000 lb. -			- per cent -		
Tree Fruits						
Apples	920,119	893,574	- 2.9	66.4	64.1	100.0
Pears	79,490	82,910	+ 4.3	5.7	6.0	100.0
Plums and prunes	29,380	19,670	- 33.0	2.1	1.4	100.0
Peaches	121,720	110,360	- 9.3	8.8	7.9	100.0
Apricots	10,627	7,012	- 34.0	0.8	0.5	100.0
Cherries (sweet)	19,340	21,682	+ 12.1	1.4	1.6	100.0
Cherries (sour)	21,320	16,981	- 20.4	1.5	1.2	100.0
Sub-total	1,201,996	1,152,189	- 4.1	86.7	82.7	100.0
Small Fruits						
Strawberries	32,024	34,663	+ 8.2	2.3	2.5	100.0
Raspberries and loganberries	18,303	14,639	- 20.0	1.3	1.1	100.0
Blueberries	19,850	27,184	+ 36.9	1.4	2.0	100.0
Blackberries	347	84	- 75.8	*	*	100.0
Cranberries	978	10,435	+967.0	0.1	0.7	100.0
Grapes	106,014	151,996	+ 43.4	7.7	10.9	100.0
Sub-total	177,516	239,001	+ 34.6	12.8	17.2	100.0
Other Fruits						
Cantaloupes	6,083	2,084	- 65.7	0.4	0.1	100.0
Total	1,385,595	1,393,274	+ 0.6	100.0	100.0	100.0

(a) Production data for the Prairie region is not recorded.

(b) Included with sweet cherries for 1961-1965.

Source: Statistics Canada and Provincial sources.

Fruits: Volume of Production Sold to Processors and the Fresh Market, Annual Average 1961-65 to 1971-74 (a)

	1961-65			1966-70			1971-74			% Change 1961-65 to 1971-74		
	Produc- tion	Proces- sing	Fresh Market	Produc- tion	Proces- sing	Fresh Market	Produc- tion	Proces- sing	Fresh Market	Produc- tion	Proces- sing	Fresh Market
	- thousand pounds -											
<b>Tree Fruit</b>												
Apples	920,119	280,008	640,111	936,951	320,200	616,751	863,094	267,550	595,544	- 6.2	- 4.4	- 7.0
Pears	79,490	37,257	42,233	81,495	39,437	42,058	82,573	39,413	43,160	+ 3.9	+ 5.8	+ 2.2
Plums and prunes	29,380	7,180	22,200	21,204	5,487	15,717	18,784	3,994	14,790	- 36.1	- 44.4	- 33.4
Peaches	121,720	56,409	65,311	95,027	29,681	65,346	105,322	24,445	80,877	- 13.5	- 56.7	+23.8
Apricots	10,627	4,105	6,522	7,086	2,540	4,546	6,676	2,300	4,376	- 37.2	- 44.0	- 32.9
Cherries (sweet)	19,340	4,156	15,184	19,271	5,903	13,368	20,201	4,135	16,066	+ 4.5	- 0.5	+ 5.8
Cherries (sour)	21,320	19,127	2,193	17,354	15,866	1,488	17,008	13,883	3,125	- 20.2	- 27.4	+42.5
Sub-total	1,201,996	408,242	793,754	1,178,388	419,114	759,274	1,113,658	355,720	757,938	- 7.3	- 12.9	- 4.5
<b>Small Fruits</b>												
Strawberries	32,024	13,766	18,258	41,626	15,992	25,634	34,185	10,031	24,154	+ 6.7	- 27.1	+32.3
Raspberries and loganberries	18,303	10,640	7,663	18,493	11,328	7,165	14,423	8,622	5,801	- 21.2	- 19.0	- 24.3
Blueberries	19,850	7,676	12,174	28,339	12,157	16,182	26,050	14,790	11,260	+ 31.2	+ 92.7	- 7.5
Cranberries	978	770	208	3,251	3,175	76	9,873	9,678	195	+909.5	+1,156.9	- 6.2
Blackberries	347	307	40	201	190	11	98	97	1	- 71.8	- 68.4	- 97.5
Grapes	106,014	73,955	32,059	130,203	99,600	30,603	147,631	125,000	22,631	+ 39.3	+ 69.0	- 29.3
Sub-total	177,516	107,114	70,402	222,113	142,442	79,671	232,310	168,218	64,092	+ 30.9	+ 57.0	- 9.0
<b>Other Fruits</b>												
Cantaloupes	6,083	-	6,083	3,124	-	3,124	2,177	-	2,177	- 64.2	-	- 64.2
Total	1,385,595	513,356	870,239	1,403,625	561,556	842,069	1,348,145	523,938	824,207	- 2.7	+ 2.1	- 5.3

(a) Data for 1975 is not available.

Source: Derived from Agriculture Canada, Statistics Canada, and Provincial sources.

Fruits: Farm Value by Commodity, by Region, (a) Annual Average 1961-65 and 1971-75

	Average Farm Value		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Farm Value of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- \$'000 -						
<u>Atlantic Region</u>							
Tree Fruits							
Apples	3,289	4,363	+ 32.7	52.6	44.7	11.3	9.7
Pears	94	181	+ 92.6	1.5	1.9	2.7	3.1
Plums and prunes	12	27	+ 58.8	0.2	0.3	1.0	1.4
Sub-total	3,395	4,571	+ 34.6	54.3	46.8	7.5	6.2
Small Fruits							
Strawberries	1,217	1,529	+ 25.6	19.5	15.7	19.9	14.9
Raspberries and loganberries	36	45	+ 25.0	0.6	0.5	1.0	0.9
Blueberries	1,583	3,562	+125.0	25.3	36.5	54.8	53.4
Cranberries	24	62	+158.3	0.4	0.6	15.8	5.0
Sub-total	2,860	5,198	+ 81.7	45.7	53.2	15.7	13.4
Total	6,255	9,769	+ 56.2	100.0	100.0	9.8	8.7
<u>Quebec</u>							
Tree Fruits							
Apples	6,793	10,849	+ 59.7	72.5	69.9	23.4	24.1
Small Fruits							
Strawberries	1,244	2,511	+101.8	13.3	16.2	20.3	24.5
Raspberries and loganberries	481	411	- 14.6	5.1	2.6	12.9	8.1
Blueberries	854	1,753	+105.3	9.1	11.3	29.6	26.3
Sub-total	2,579	4,675	+ 81.3	27.5	30.1	14.2	12.1
Total	9,372	15,524	+ 65.6	100.0	100.0	14.6	13.8

Fruits: Farm Value by Commodity, by Region (a) Annual Average 1961-65 and 1971-75

	Average Farm Value		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Farm Value of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- \$'000 -			- per cent -			
<b>Ontario</b>							
Tree Fruits							
Apples	7,927	15,904	+100.6	29.2	31.4	27.3	35.3
Pears	1,857	3,041	+ 63.8	6.8	6.0	54.1	52.7
Plums and prunes	659	1,205	+ 82.9	2.4	2.4	54.0	61.2
Peaches	5,651	9,324	+ 65.0	20.8	18.4	85.5	74.2
Cherries (sweet)	1,448	1,361	- 6.0	5.3	2.7	47.9	30.3
(sour)	1,730	2,455	+ 41.9	6.4	4.9	100.0	89.3
Sub-total	19,272	33,290	+ 72.7	70.9	65.8	42.4	45.4
<b>Small Fruits</b>							
Strawberries	1,707	3,622	+112.2	6.3	7.2	27.9	35.3
Raspberries and loganberries	892	528	- 40.8	3.3	1.0	23.9	10.4
Grapes	5,017	13,055	+160.2	18.5	25.8	95.5	84.0
Sub-total	7,616	17,205	+125.9	28.0	34.0	41.9	44.4
<b>Other Fruits</b>							
Cantaloupes	301	123	- 59.1	1.1	0.2	100.0	100.0
Total	27,189	50,618	+ 86.2	100.0	100.0	42.5	45.1



Fruits: Farm Value by Commodity, by Region (a) Annual Average 1961-65 and 1971-75

	Average Farm Value		% Change 1961-65 to 1971-75	Share of Regional Total		Share of Total Farm Value of Similar Fruits	
	1961-65	1971-75		1961-65	1971-75	1961-65	1971-75
	- \$'000 -						
British Columbia							
Tree Fruits							
Apples	10,990	13,896	+ 26.4	51.9	38.3	37.9	30.9
Pears	1,484	2,552	+ 72.0	7.0	7.0	43.2	44.2
Plums and prunes	549	736	+ 34.1	2.6	2.0	45.0	37.4
Peaches	959	3,240	+237.9	4.5	8.9	14.5	25.8
Apricots	487	717	+ 47.2	2.3	2.0	100.0	100.0
Cherries (sweet)	1,574	3,136	+ 99.2	7.4	8.6	52.1	69.7
Cherries (sour)	(b)	294	..	..	0.8	..	10.7
Sub-total	16,043	24,571	+ 53.2	75.8	67.7	35.3	33.5
Small Fruits							
Strawberries	1,947	2,597	+ 33.4	9.2	7.2	31.8	25.3
Raspberries and loganberries	2,327	4,094	+ 75.9	11.0	11.3	62.3	80.6
Blueberries	452	1,350	+198.7	2.1	3.7	15.6	20.3
Blackberries	45	17	- 62.2	0.2	*	100.0	100.0
Cranberries	128	1,169	+813.3	0.6	3.2	84.2	94.9
Grapes	234	2,484	+961.5	1.1	6.8	4.5	16.0
Sub-total	5,133	11,711	+128.2	24.2	32.3	28.2	30.2
Total	21,176	36,282	+ 71.3	100.0	100.0	33.1	32.3

Fruits: Farm Value by Commodity, by Region (a) Annual Average 1961-65 and 1971-75

	Average Farm Value		% Change 1961-65 to 1971-75	Share of		Share of Total Farm Value of Similar Fruits
	1961-65	1971-75		1961-65	Regional Total	
	-			-		
Canada						
Tree Fruits						
Apples	28,999	45,012	+ 55.2	45.3	40.1	100.0
Pears	3,435	5,774	+ 68.1	5.4	5.1	100.0
Plums and prunes	1,220	1,968	+ 61.3	1.9	1.8	100.0
Peaches	6,610	12,563	+ 90.1	10.3	11.2	100.0
Apricots	487	717	+ 47.2	0.8	0.6	100.0
Cherries (sweet)	3,022	4,497	+ 48.8	4.7	4.0	100.0
Cherries (sour)	1,730	2,749	+ 58.9	2.7	2.5	100.0
Sub-total	45,503	73,280	+ 61.0	71.1	65.3	100.0
Small Fruits						
Strawberries	6,115	10,259	+ 67.8	9.6	9.1	100.0
Raspberries and loganberries	3,737	5,079	+ 35.9	5.8	4.5	100.0
Blueberries	2,889	6,665	+130.7	4.5	5.9	100.0
Blackberries	45	17	- 62.2	0.1	*	100.0
Cranberries	152	1,232	+710.5	0.2	1.1	100.0
Grapes	5,252	15,539	+195.9	8.2	13.9	100.0
Sub-total	18,190	38,791	+113.3	28.4	34.6	100.0
Other Fruits						
Cantaloupes	301	123	- 59.1	0.5	0.1	100.0
Total	63,994	112,194	+ 75.3	100.0	100.0	100.0

(a) Farm value data for Prairie region is not available.

(b) Included with sweet cherries from 1961-1965.

Source: Statistics Canada and Provincial sources.

Fruits: Average Unit Farm Values, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75	% Change 1961-65 to 1971-75
	- cents per pound -								
<b>Tree Fruits</b>									
Apples	3.2	3.6	3.1	4.3	8.0	6.0	4.1	5.0	+ 56.3 (b)
fresh	..	4.5	3.9	5.6	9.6	7.5	..	6.7 (a)	+ 48.9 (b)
processed	..	1.7	1.7	2.1	4.7	3.4	..	2.9	+ 70.6 (b)
Pears	4.3 (c)	5.6	5.4	6.7	7.0	8.1	7.7	7.0 (a)	+ 62.8 (d)
fresh	4.6 (c)	6.4	5.9	8.0	8.5	9.5	..	7.9 (a)	+ 71.7 (d)
processed	4.2 (c)	4.9	5.0	5.6	4.8	6.8	..	5.6 (a)	+ 33.3 (d)
Plums and prunes	4.2	6.7	7.1	9.9	10.9	12.0	10.8	10.0	+128.1
Peaches	5.4	8.9	8.9	11.6	11.9	12.9	11.9	11.4 (a)	+111.1 (d)
fresh	6.3 (c)	9.9	9.5	12.8	13.0	13.8	..	12.1 (a)	+ 92.1 (d)
processed	5.2 (c)	6.8	7.1	7.8	8.4	10.0	..	8.3 (a)	+ 59.6 (d)
Apricots	4.6	5.4	6.7	7.9	10.2	14.7	11.4	10.2	+121.7
Cherries (sweet)	15.6	18.3	15.9	23.8	21.1	23.3	21.0	20.7	+ 32.7
Cherries (sour)	8.1	13.4	13.1	10.7	22.1	22.2	16.2	16.2	+100.0
<b>Small Fruits</b>									
Strawberries	19.1	21.8	21.1	26.7	30.9	34.0	37.2	29.6	+ 55.0
Raspberries and loganberries	20.4	22.4	28.2	36.2	46.2	35.2	27.6	34.7	+ 70.1
Blueberries	14.6	15.9	17.0	26.7	28.8	20.2	25.8	24.5	+ 16.8
Blackberries	12.9	14.7	15.4	20.2	23.0	30.0	31.6	20.8	+ 61.2
fresh	18.4	24.2	-	25.0	-	-	25.7	25.6	+ 39.1
processed	12.2	14.1	15.4	20.0	23.0	30.0	35.0	20.7	+ 69.7
Cranberries	15.5	14.7	9.1	12.2	13.6	11.2	12.6	11.8	- 23.9
Grapes	5.0	6.3	8.0	8.8	9.8	12.0	12.2	10.2	+104.0
<b>Other Fruits</b>									
Cantaloupes	4.9	5.5	5.1	4.4	5.8	7.6	7.8	5.9	+ 20.4
Total	4.6	5.8	5.9	7.1	10.4	9.1	7.9	8.1	+ 76.1

(a) Four year average 1971-1974, data for 1975 not available.

(b) Percentage change 1966-70 to 1971-74.

(c) Four year average excluding 1961.

(d) Percentage change 1962-65 to 1971-74.

Source: Derived from Statistics Canada and Provincial data.

- cents per pound -

Tree Fruits		Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75	% Change 1961-65 to 1971-75
Apples										
	Ont.	3.1	3.7	3.2	4.5	10.6	7.6	5.6	6.0	+ 93.5
	B.C.	3.8	4.6	4.6	4.7	6.3	6.7	3.5	5.1	+ 34.2
Apples, fresh										
	Ont.	..	4.3	3.9	5.7	12.8	9.5	..	7.7 (a)	+ 79.1 (b)
	B.C.	..	5.7	5.8	6.2	7.9	8.1	..	7.1 (a)	+ 24.6 (b)
Apples, processing										
	Ont.	..	2.3	2.1	2.9	7.0	4.9	..	4.0 (a)	+ 73.9 (b)
	B.C.	..	0.8	0.6	0.4	2.1	1.2	..	1.2 (a)	+ 50.0 (b)
Pears										
	Ont.	4.0	5.5	6.0	6.9	8.0	10.1	9.9	8.0	+100.0
	B.C.	4.8	5.8	4.7	6.7	6.6	6.8	5.5	6.1	+ 27.1
Pears, fresh										
	Ont.	3.8 (c)	6.9	7.1	8.0	12.5	13.9	..	9.4 (a)	+147.4 (d)
	B.C.	4.9	6.1	5.1	8.0	7.8	8.0	..	7.3 (a)	+ 49.0 (d)
Pears, processing										
	Ont.	4.2 (c)	4.9	5.4	6.4	5.9	8.4	..	6.5 (a)	+ 54.8 (d)
	B.C.	4.1	5.1	3.5	3.6	3.8	4.5	..	3.9 (a)	- 4.9
Plums and prunes										
	Ont.	4.0	7.5	8.4	10.3	14.9	14.9	14.9	12.3	+207.5
	B.C.	4.4	5.9	5.8	9.2	8.4	9.3	6.5	7.6	+ 72.7
Peaches										
	Ont.	5.7	9.1	8.8	12.0	11.6	12.9	11.3	11.2	+ 96.5
	B.C.	4.2	8.0	9.1	10.5	12.8	13.1	13.9	12.1	+188.1
Peaches, fresh										
	Ont.	6.8 (c)	10.2	9.5	13.5	12.8	13.8	..	12.2 (a)	+ 79.4 (d)
	B.C.	4.4	8.2	9.4	11.0	13.6	13.9	..	12.1	+175.0

Fruits: Average Unit Farm Values, by Commodity, Ontario and British Columbia, 1961-65, 1966-70 and 1971 to 1975

Appendix Table 57 (cont.)									
	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75	% Change 1961-65 to 1971-75
	- cents per pound -								
Tree Fruits (cont.)									
Peaches, processing									
Ont.	5.5(c)	6.7	7.1	8.0	8.5	10.4	..	8.4(a)	+ 52.7(d)
B.C.	3.8(c)	7.5	7.0	6.9	7.9	7.8	..	7.4(a)	+ 94.7(d)
Apricots									
B.C.	4.6	5.4	6.7	7.9	10.2	14.7	11.4	10.2	+121.7
Cherries (sweet)									
Ont.	13.5	15.0	14.0	20.4	20.0	26.6	23.4	19.8	+ 46.7
B.C.	18.2	21.0	17.3	26.8	21.5	22.3	20.2	21.2	+ 16.5
Cherries (sour)									
Ont.	8.1	13.4	13.0	10.4	21.9	22.0	15.7	15.8	+ 95.1
B.C.	-	-	14.2	14.8	23.5	24.6	20.9	19.8	..
Small Fruits									
Strawberries									
Ont.	20.1	24.0	21.9	26.0	30.0	33.9	37.6	29.8	+ 48.3
B.C.	17.8	19.8	17.8	23.8	32.0	33.2	32.2	26.8	+ 50.6
Raspberries									
Ont.	29.6	40.8	37.8	43.9	54.9	60.8	71.0	51.0	+ 72.3
B.C.	17.1	19.7	25.8	35.1	45.0	31.8	22.6	32.1	+ 87.7
Grapes									
Ont.	4.9	6.3	8.0	8.6	9.6	11.6	11.6	9.9	+102.0
B.C.	6.7	7.4	8.6	10.2	11.2	13.9	15.7	12.3	+ 83.6

(a) Four year average 1971-1974, data for 1975 not available.

(b) Percentage change 1966-70 to 1971-74.

(c) Four year average excluding 1961.

(d) Percentage change 1962-65 to 1971-74.

Source: Derived from Statistics Canada and Provincial data.

Fruits: Volume of Fresh Imports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
<b>A. Tree Fruits</b>								
Apples (a)	54,283	64,455	86,903	80,297	119,464	162,570	135,654	116,978
Pears (a)	25,546	35,363	42,922	40,663	61,300	50,733	52,308	49,585
Plums and prunes	19,107	23,588	27,088	28,566	27,372	43,178	35,181	32,277
Peaches	33,836	36,426	34,760	26,378	30,357	29,512	28,344	29,870
Apricots	3,804	3,349	3,000	1,367	2,255	1,106	1,807	1,907
Cherries (sweet)	2,859	5,062	8,687	7,767	15,071	14,934	10,912	11,474
Cherries (sour)	201	227	67	601	373	427	388	371
Sub-total	139,636	168,470	203,427	185,639	256,192	302,460	264,594	242,462
<b>B. Small Fruits</b>								
Strawberries	20,713	17,528	19,436	24,146	26,329	31,283	26,764	25,592
Raspberries and loganberries	46	61	6	266	98	11	6	77
Blueberries	1,319	2,181	3,367	2,898	3,270	5,233	4,712	3,896
Cranberries	4,419	2,979	4,252	4,771	4,129	4,173	3,717	4,209
Grapes	203,343	255,725	263,157	223,181	262,220	260,070	277,793	257,284
Sub-total	229,840	278,474	290,218	255,262	296,046	300,770	312,992	291,058
<b>C. Other Fruits</b>								
Cantaloupes	38,106	50,623	52,885	68,112	67,745	66,449	67,056	64,449
Total	407,582	497,567	546,530	509,013	619,983	669,679	644,642	597,969

a) Crop year.

Source: Derived from Statistics Canada data.



Fruits: Value of Fresh Imports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand dollars -							
<b>A. Tree Fruits</b>								
Apples(a)	4,022	5,689	9,353	9,612	16,350	25,610	20,331	16,251
Pears(a)	2,383	3,681	4,426	5,789	8,341	8,047	8,299	6,980
Plums and prunes	2,068	3,359	3,956	5,515	6,302	7,825	8,356	6,391
Peaches	2,451	3,810	4,270	4,288	5,833	6,114	6,890	5,479
Apricots	311	346	256	228	398	309	425	323
Cherries (sweet)	840	1,559	2,402	2,921	4,881	5,341	4,668	4,043
Cherries (sour)	54	71	22	123	115	174	164	120
Sub-total	12,129	18,515	24,685	28,476	42,220	53,420	49,133	39,587
<b>B. Small Fruits</b>								
Strawberries	4,178	4,280	4,672	5,761	7,522	8,939	8,393	7,057
Raspberries and loganberries	11	14	2	78	43	4	2	26
Blueberries	332	563	868	858	1,069	1,622	1,767	1,237
Cranberries	711	637	778	872	800	887	843	836
Grapes	16,506	24,763	34,537	36,631	43,760	41,017	47,509	40,691
Sub-total	21,738	30,257	40,857	44,200	53,194	52,469	58,514	49,847
<b>C. Other Fruits</b>								
Cantaloupes	2,094	3,316	3,979	5,288	6,064	6,910	7,884	6,025
Total	35,961	52,088	69,521	77,964	101,478	112,799	115,531	95,459

(a) Crop year.

Source: Derived from Statistics Canada data.

Fruits: Volume of Fresh Non-Competing Imports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
A. <u>Tree Fruits</u>								
<u>Apples</u>	-	-	-	-	-	-	-	-
Pears	7,845	12,631	16,428	13,579	15,797	19,249	15,240	16,059
Plums and prunes	3,294	3,408	5,505	5,894	4,299	6,253	4,143	5,219
Peaches	21,422	20,250	16,589	16,496	18,661	19,130	20,163	18,208
Apricots	539	476	532	763	966	520	507	658
Cherries (sweet)	111	126	196	566	374	375	53	313
Cherries (sour)	5	12	1	57	105	56	7	45
Sub-total	33,216	36,903	39,251	37,355	40,202	45,583	40,113	40,501
B. <u>Small Fruits</u>								
Strawberries	8,458	9,921	13,032	15,016	16,006	18,109	15,911	15,615
Raspberries and loganberries	17	19	3	104	94	10	4	43
Blueberries	920	1,507	1,842	1,524	2,134	2,578	2,983	2,212
Cranberries	322	147	39	703	46	88	293	233
Grapes (a)	203,189	252,811	262,424	222,455	260,718	259,775	277,118	256,498
Sub-total	212,906	264,405	277,340	239,802	278,998	280,560	296,309	274,602
C. <u>Other Fruits</u>								
Cantaloupes	23,830	31,152	32,355	43,090	43,676	41,402	41,678	40,440
Total	269,952	332,460	348,946	320,247	362,876	367,545	378,100	355,543

(a) Includes Labrusca and Vinifera grapes.

Source: Derived from Statistics Canada data.

Fruits: Value of Fresh Non-Competing Imports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand dollars -							
<b>A. Tree Fruits</b>								
Apples	-	-	-	-	-	-	-	-
Pears	785	1,473	1,824	2,211	2,593	3,239	3,030	2,579
Plums and prunes	390	517	606	1,190	1,061	1,550	1,293	1,140
Peaches	1,612	2,310	2,549	2,738	3,906	4,248	5,272	3,743
Apricots	64	79	96	158	235	166	154	162
Cherries (sweet)	26	43	50	265	163	188	26	138
Cherries (sour)	5	5	1	26	22	23	3	15
Sub-total	2,882	4,427	5,126	6,588	7,980	9,414	9,778	7,777
<b>B. Small Fruits</b>								
Strawberries	1,945	2,495	3,122	3,637	4,624	5,275	5,170	4,366
Raspberries and loganberries	4	4	1	31	41	4	1	16
Blueberries	242	406	538	482	731	907	1,145	761
Cranberries	45	27	12	117	12	22	72	47
Grapes (a)	16,494	24,466	34,433	36,525	43,559	40,974	47,395	40,577
Sub-total	18,730	27,398	38,106	40,792	48,967	47,182	53,783	45,766
<b>C. Other Fruits</b>								
Cantaloupes	1,462	2,256	2,716	3,530	4,329	4,680	5,598	4,171
Total	23,074	34,081	45,948	50,910	61,276	61,276	69,159	57,714

(a) Includes Labrusca and Vinifera grapes.

Source: Derived from Statistics Canada data.

Fruits: Volume of Fresh Competing Imports, (a) by Commodity, 1961-65, 1966-70 and 1971-75

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
A. Tree Fruits								
Apples	54,283	64,455	86,903	80,297	119,464	162,570	135,654	116,978
Pears	17,701	22,732	26,494	27,084	45,503	31,484	37,068	33,527
Plums and prunes	15,813	20,180	21,583	22,672	23,073	36,925	31,038	27,058
Peaches	12,414	16,176	18,171	9,882	11,696	10,382	8,181	11,662
Apricots	3,265	2,873	2,468	604	1,289	586	1,300	1,249
Cherries (sweet)	2,748	4,936	8,491	7,201	14,697	14,559	10,859	11,161
Cherries (sour)	196	215	66	544	268	371	381	326
Sub-total	106,420	131,567	164,176	148,284	215,990	256,877	224,481	201,962
B. Small Fruits								
Strawberries	12,255	7,607	6,404	9,130	10,323	13,174	10,853	9,977
Raspberries	29	42	3	162	4	1	2	34
Blueberries	399	674	1,525	1,374	1,136	2,655	1,729	1,684
Cranberries	4,097	2,832	4,213	4,068	4,083	4,085	3,424	3,975
Grapes (b)	154	2,914	733	726	1,502	295	675	786
Sub-total	16,934	14,069	12,878	15,460	17,048	20,210	16,683	16,456
C. Other Fruits								
Cantaloupes	14,276	19,471	20,530	25,022	24,069	25,047	25,378	24,009
Total	137,630	165,107	197,584	188,766	257,107	302,134	266,542	242,427

(a) Imports during Canadian marketing period.

(b) Labrusca grapes only.

Source: Derived from Statistics Canada data.

Fruits: Value of Fresh Competing Imports, (a) by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand dollars -				
A. Tree Fruits								
Apples	4,022	5,689	9,353	9,612	16,350	25,610	20,331	16,251
Pears	1,598	2,208	2,602	3,578	5,748	4,808	5,269	4,401
Plums and prunes	1,678	2,842	3,350	4,325	5,241	6,275	7,063	5,251
Peaches	839	1,500	1,721	1,550	1,927	1,866	1,618	1,736
Apricots	247	267	160	70	163	143	271	161
Cherries (sweet)	814	1,516	2,352	2,656	4,718	5,153	4,642	3,904
Cherries (sour)	49	66	21	97	93	151	161	105
Sub-total	9,247	14,088	19,559	21,888	34,240	44,006	39,355	31,810
B. Small Fruits								
Strawberries	2,233	1,785	1,550	2,124	2,898	3,664	3,223	2,692
Raspberries	7	10	1	47	2	*	1	10
Blueberries	90	157	330	376	338	715	622	476
Cranberries	666	610	766	755	788	865	771	789
Grapes(b)	12	297	104	106	201	43	114	114
Sub-total	3,008	2,859	2,751	3,408	4,227	5,287	4,731	4,081
C. Other Fruits								
Cantaloupes	632	1,060	1,263	1,758	1,735	2,230	2,286	1,854
Total	12,887	18,007	23,573	27,054	40,202	51,523	46,372	37,745

(a) Imports during Canadian marketing period.

(b) Labrusca grapes only.

Source: Derived from Statistics Canada data.

Fruits: Volume of Fresh Competing Imports, Fresh Market and Processing,  
by Commodity, Average 1961-65, 1966-70 and 1971-74

	Imports for Processing <sup>(a)</sup>			Competing Imports for the Fresh Market		
	1961-65	1966-70	1971-74 <sup>(b)</sup>	1961-65	1966-70	1971-74
- thousand pounds -						
<u>Tree Fruits</u>						
Apples	2,783	5,600	14,075	51,500	58,855	98,234
Pears	1,176	5,327	4,074	16,525	17,405	28,567
Plums and prune plums	817	2,284	2,531	14,996	17,896	23,532
Peaches	1,876	2,083	1,800	10,538	14,093	10,733
Apricots	2,264	2,110	533	1,001	763	704
Cherries, sweet	286	506	2,302	2,462	4,430	8,935
Cherries, sour	181	204	330	15	11	..
Sub-total	9,383	18,114	25,645	97,037	113,453	170,705
<u>Small Fruits</u>						
Strawberries	7,060	3,886	3,622	5,195	3,721	6,136
Raspberries and loganberries	46	61	95	..	..	..
Blueberries	..	..	..	399	674	1,673
Cranberries	1,457	1,443	2,683	2,640	1,389	1,429
Grapes	4,635	13,600	20,667	..	..	..
Sub-total	13,198	18,990	27,067	8,234	5,784	9,238
<u>Other Fruits</u>						
Cantaloupes	..	..	..	14,276	19,471	23,667
Total	22,581	37,104	52,712	119,547	138,708	203,610

(a) Imports for processing are for full crop year.

(b) Data for 1975 is not available.

Source: Derived from Statistics Canada and Tariff Board estimates.



Fruits: Additional Domestic Acreage Required to Displace Imports, by Commodity, Average 1971-1975(a)

	Total Acres 1971	Acres Required for Fresh Competing Imports -acres-	%	Acres Required for Processed Imports -acres-	%	Total Acreage Required -acres-	%
<u>Tree Fruits</u>							
Apples	92,292	12,082	13.1	1,474	1.6	13,556	14.7
Pears	11,478	4,642	40.4	2,269	19.8	6,911	60.2
Plums and prunes	4,642	6,386	137.6	6,446	138.9	12,832	276.4
Peaches	15,538	1,642	10.6	9,262	59.6	10,904	70.2
Apricots	982	175	17.8	1,328	135.2	1,503	153.1
Cherries (sweet)	5,324	2,740	51.5	2,131	40.0	4,871	91.5
(sour)	4,444	85	1.9	921	20.7	1,006	22.6
Sub-total	134,700	27,752	20.6	23,831	17.7	51,583	38.3
<u>Small Fruits</u>							
Strawberries	12,785	3,680	28.8	6,885	53.9	10,565	82.6
Raspberries	4,288	10	0.2	196	4.6	206	4.8
Grapes	24,512	127	0.5	24,400	99.5	24,527	100.1
Sub-total	41,585	3,817	9.2	31,481	75.7	35,298	84.9
Total	176,285	31,569	16.6	55,312	31.4	86,881	49.3

(a) Based on average Canadian yield 1971-75.

Source: Derived from Statistics Canada and Provincial data.

Fruits: Volume of Processed Imports, (a) by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
A. Tree Fruits								
Apples(b)	32,186	34,728	27,383	12,210	14,027	9,970	7,775	14,273
Pears(b)	10,355	9,943	14,718	17,363	14,068	19,088	16,722	16,392
Plums and prunes	31,501	27,171	27,739	27,317	26,113	26,284	29,101	27,311
Peaches	32,803	56,069	67,844	59,908	69,017	65,645	66,516	65,786
Apricots	9,004	8,641	9,088	10,075	9,598	8,453	10,207	9,484
Cherries (sweet)	8,210	7,849	8,075	8,963	8,704	8,958	8,693	8,679
(sour)	4,049	2,104	1,990	1,771	6,220	4,340	3,272	3,519
Sub-total	128,108	146,505	156,837	137,607	147,747	142,738	142,286	145,443
B. Small Fruits								
Strawberries	9,972	13,273	11,987	17,248	19,664	23,068	21,363	18,666
Raspberries and loganberries	585	515	593	681	804	668	594	668
Blueberries	..	..	..	..	..	..	..	..
Cranberries	..	..	..	..	..	..	..	..
Grapes(c)	33,344	59,953	105,848	115,903	199,435	164,883	170,452	151,304
Sub-total	43,901	73,741	118,428	133,832	219,903	188,619	192,409	170,638
C. Other Fruits								
Cantaloupes	..	..	..	..	..	..	..	..
Total	172,009	220,246	275,265	271,439	367,650	331,357	334,695	316,081

(a) Processed fruits converted to fresh equivalent.

(b) Crop year.

(c) Excludes imports of raisins.

Source: Agriculture Canada, Statistics Canada, and the U.S. Department of Commerce.

Fruits: Total Volume of Fresh Fruits and Processed Imports, (a) by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
				- thousand pounds -				
A. <u>Tree Fruits</u>								
Apples (b)	86,469	99,183	114,286	92,507	133,491	172,540	143,429	131,251
Pears (b)	35,901	45,306	57,640	58,026	75,368	69,821	69,030	65,977
Plums and prunes	50,608	50,759	54,827	55,883	53,485	69,462	64,282	59,588
Peaches	66,639	92,495	102,604	86,286	99,374	95,157	94,860	95,656
Apricots	12,808	11,990	12,088	11,442	11,853	9,559	12,014	11,391
Cherries (sweet)	11,069	12,911	16,762	16,730	23,775	23,892	19,605	20,153
Cherries (sour)	4,250	2,331	2,057	2,372	6,593	4,767	3,660	3,890
Sub-total	267,744	314,975	360,264	323,246	403,939	445,198	406,880	387,905
B. <u>Small Fruits</u>								
Strawberries	30,685	30,801	31,423	41,394	45,993	54,351	48,127	44,258
Raspberries and loganberries	631	576	599	947	902	679	600	745
Blueberries	1,319	2,181	3,367	2,898	3,270	5,233	4,712	3,896
Cranberries	4,419	2,979	4,252	4,771	4,129	4,173	3,717	4,209
Grapes (c)	236,687	315,678	369,005	339,084	461,655	424,953	448,245	408,588
Sub-total	273,741	352,215	408,646	389,094	515,949	489,389	505,401	461,696
C. <u>Other Fruits</u>								
Cantaloupes	38,106	50,623	52,885	68,112	67,745	66,449	67,056	64,449
Total	579,591	717,813	821,795	780,452	987,633	1,001,036	979,337	914,051

(a) Processed imports converted to fresh equivalent.

(b) Crop year.

(c) Excludes imports of raisins.

Source: Agriculture Canada, Statistics Canada, and the U.S. Department of Commerce.

Fruits: Volume of Fresh Competing Imports<sup>(a)</sup> and Processed Imports,<sup>(b)</sup> by Commodity, Average 1961-65, 1966-70 and 1971-75

	<u>Average 1961-65</u>	<u>Average 1966-70</u>	<u>Average 1971-75</u>
- thousand pounds -			
<u>Tree Fruits</u>			
Apples	86,469	99,183	131,251
Pears	28,056	32,675	49,919
Plums and prune plums	47,314	47,351	54,369
Peaches	45,217	72,245	77,448
Apricots	12,269	11,514	10,733
Cherries (sweet)	10,958	12,785	19,840
(sour)	4,275	2,319	3,845
Sub-total	<u>234,528</u>	<u>278,072</u>	<u>347,405</u>
<u>Small Fruits</u>			
Strawberries	22,227	20,880	28,643
Raspberries and loganberries	614	557	702
Blueberries	399	674	1,684
Cranberries	4,097	2,832	3,975
Grapes <sup>(c)</sup>	<u>33,498</u>	<u>62,867</u>	<u>152,090</u>
Sub-total	<u>60,835</u>	<u>87,810</u>	<u>187,094</u>
<u>Other Fruits</u>			
Cantaloupes	<u>14,276</u>	<u>19,471</u>	<u>24,009</u>
Total	309,639	385,353	558,508

(a) Imports during Canadian marketing period.

(b) Processed fruits converted to the fresh equivalent.

(c) Grape imports exclude imports of raisins.

Source: Appendix Tables 62 and 66.

Fruits: Volume of Imports by Country of Origin, by Commodity, 1966-1970 and 1971-1975

	1966-70					1971-75				
	Total	United States	South Africa	New Zealand	Mexico	Others	Total	United States	South Africa	New Zealand
- thousand pounds -										
<b>Tree Fruits</b>										
Apples	61,235	50,602	4,795	3,862	-	1,976	109,548	90,598	7,373	8,739
Pears	34,518	29,883	2,499	697	-	1,439	48,269	41,309	1,622	1,838
Plums	19,116	18,853	45	-	-	218	26,971	26,742	-	6
Prune plums	4,472	4,468	-	-	-	4	5,306	5,306	-	-
Peaches	36,426	36,354	14	-	-	57	29,870	29,776	-	4
Apricots	3,349	3,349	-	-	-	-	1,907	1,900	-	3
Cherries	5,289	5,287	-	-	-	2	11,845	11,827	-	2
Sub-total	164,405	148,796	7,353	4,559	-	3,696	233,716	207,458	8,995	11,592
<b>Small Fruits</b>										
Strawberries	17,528	16,790	-	5	728	5	25,592	23,829	-	3
Raspberries	61	61	-	-	-	-	78	78	-	*
Blueberries	2,181	2,181	-	-	-	-	3,896	3,896	-	-
Cranberries	2,981	2,981	-	-	-	-	4,209	4,208	-	-
Grapes	255,725	247,645	5,222	-	260	2,598	257,284	247,051	2,617	*
Sub-total	278,476	269,658	5,222	5	988	2,603	291,058	279,062	2,617	3
<b>Other Fruits</b>										
Cantaloupes	50,623	40,765	-	-	9,783	74	64,449	53,280	-	-
Total	493,503	459,219	12,575	4,564	10,771	6,373	589,224	539,800	11,612	10,595
										14,259
										625
										10,544
										12,958
										6,961
										6,961

Source: Statistics Canada.

Fruits: Volume of Fresh Exports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand pounds -							
Apples	128,795	132,739	102,427	100,238	118,482	77,919	86,221	97,057
Grapes	12,913	15,318	2,561	1,121	1,923	7,302	212	2,624
Pears	5,149	5,142	3,425	2,642	599	3,594	3,864	2,825
Fruit except berries, n.e.s.	3,291	2,484	826	992	1,669	870	911	1,054
Blueberries	6,331	7,018	4,001	3,915	5,381	3,705	5,158	4,432
Raspberries	2,887	4,283	2,266	2,376	3,437	4,332	2,981	3,078
Berries, n.e.s.	960	2,464	12,306	5,527	10,069	6,591	10,403	8,979
Total	160,326	169,448	127,811	116,810	141,560	104,312	109,750	120,049

Source: Statistics Canada.



Fruits: Value of Fresh Exports, by Commodity, 1961-65, 1966-70 and 1971 to 1975

	Average 1961-65	Average 1966-70	1971	1972	1973	1974	1975	Average 1971-75
	- thousand dollars -							
Apples	10,657	12,470	9,316	8,634	14,715	10,740	11,286	10,938
Grapes	664	1,003	226	126	223	763	30	274
Pears	422	485	255	252	83	332	357	256
Fruits except berries, n.e.s.	531	590	135	141	387	174	167	201
Blueberries	997	1,175	676	889	1,582	751	1,291	1,038
Raspberries	534	927	568	712	1,333	1,704	820	1,027
Berries, n.e.s.	196	646	1,874	825	1,458	855	1,432	1,289
Total	14,002	17,296	13,050	11,579	19,781	15,319	15,383	15,022

Source: Statistics Canada.

Fruits: Volume of Fresh Exports as a Percentage of Canadian Production, Average, 1961-65, 1966-70, and 1971-75

	1961-65			1966-70			1971-75		
	Total Production	Fresh Exports	%	Total Production	Fresh Exports	%	Total Production	Fresh Exports	%
	'000 lb.	'000 lb.		'000 lb.	'000 lb.		'000 lb.	'000 lb.	
<b>Tree Fruits</b>									
Apples (a)	920,119	133,631	14.5	936,951	131,511	14.0	893,574	95,664	10.7
Pears (a)	79,490	5,117	6.4	81,495	5,251	6.4	82,910	2,722	3.3
Plums and prune plums	29,380	197	0.7	21,204	57	0.3	19,670	76 <sup>(b)</sup>	0.4
Peaches	121,720	351	0.3	95,027	168	0.2	110,360	140 <sup>(b)</sup>	0.1
Apricots	10,627	555	5.2	7,086	148	2.1	7,012	80	1.1
Cherries (sweet)	19,340	2,267	11.7	19,271	1,948	10.1	21,683	235	1.1
Cherries (sour)	21,320	-	-	17,354	-	-	16,982	-	-
Sub-total	1,201,996	142,118	11.8	1,178,388	139,083	11.8	1,152,189	98,917	8.6
<b>Small Fruits</b>									
Strawberries	32,024	313	1.0	41,626	1,559	3.7	34,663	612	1.8
Raspberries and loganberries	18,303	2,887	15.8	18,493	4,283	23.2	14,639	3,078	21.0
Blueberries	19,850	6,331	31.9	28,339	7,018	24.8	27,184	4,432	16.3
Blackberries	347	-	-	201	-	-	84	-	-
Cranberries	978	-	-	3,251	1,156	35.6	10,435	9,583 <sup>(b)</sup>	91.8
Grapes	106,014	12,913	12.2	130,203	15,318	11.8	151,996	2,624	1.7
Sub-total	177,516	22,444	12.6	222,113	29,334	13.2	239,001	20,329	8.5
<b>Other Fruits</b>									
Cantaloupes	6,083	271	4.5	3,124	106	3.4	2,084	99	4.8
Total	1,385,595	164,833	11.9	1,403,625	168,523	12.0	1,393,274	119,345	8.6

(a) Crop years.

(b) Four year average, 1971-74.

Source: Derived from Agriculture Canada, Statistics Canada and various U.S. publications.

Fruits: Volume of Exports, by Commodity, by Country of Destination, Average, 1966-1970 and 1971-1975

	1966-70			1971-75				
	<u>Total</u>	<u>United States</u>	<u>United Kingdom</u>	<u>Others</u>	<u>Total</u>	<u>United States</u>	<u>United Kingdom</u>	<u>Others</u>
				-	thousand pounds -			
Tree Fruits								
Apples	132,739	72,471	34,070	26,198	97,057	70,386	7,748	18,923
Pears	5,142	3,717	-	1,426	2,825 (a)	2,583	-	242
Plums and prune plums	57	30	28	-	76 (a)	19	*	57
Peaches	168	168	-	-	140 (a)	140	-	-
Apricots	148	-	148	-	80	80	-	-
Cherries (sweet)	1,948	1,910	38	*	235	231	2	2
Sub-total	140,202	78,296	34,284	27,624	100,413	73,439	7,750	19,224
Small Fruits								
Strawberries	1,559	1,559	-	-	612	612	-	-
Raspberries and loganberries	4,283	4,283	-	-	3,078	3,078	-	-
Blueberries	7,018	7,016	1	1	4,432 (a)	4,324	14	94
Cranberries	1,156	1,156	-	-	9,583	9,583	-	-
Grapes	15,318	15,315	-	3	2,624	2,621	-	3
Sub-total	29,334	29,329	1	4	20,329	20,218	14	97
Other Fruits								
Cantaloupes	106	106	-	-	99	99	-	-
Total	169,642	107,731	34,285	27,628	120,841	93,756	7,764	19,321

(a) Four year average, 1971-1974.

Source: Derived from Statistics Canada and Agriculture Canada data.

Fruits: Balance of Trade, 1961-1971

	<u>Exports</u>	<u>Competing Imports</u>	<u>Total Imports</u>	<u>Trade Balance Competing Imports</u>	<u>Total Trade Balance</u>
- thousand dollars -					
1961	10,372	12,931	32,681	- 2,559	- 22,309
1962	12,220	10,865	31,764	+ 1,355	- 19,544
1963	16,299	11,200	34,314	+ 5,099	- 18,015
1964	16,681	13,551	38,308	+ 3,130	- 21,627
1965	14,436	15,889	42,728	- 1,453	- 28,292
Average 1961-65	14,002	12,887	35,961	+ 1,115	- 21,959
1966	15,904	14,652	43,600	+ 1,252	- 27,696
1967	18,942	15,094	47,220	+ 3,848	- 28,278
1968	20,280	16,483	52,104	+ 3,797	- 31,824
1969	17,376	23,212	60,373	- 5,836	- 42,997
1970	13,977	20,598	57,152	- 6,621	- 43,175
Average 1966-70	17,296	18,007	52,088	- 711	- 34,792
1971	13,050	23,573	69,521	-10,523	- 56,471
1972	11,579	27,054	77,964	-15,475	- 66,385
1973	19,781	40,202	101,478	-20,421	- 81,697
1974	15,319	51,523	112,799	-36,204	- 97,480
1975	15,383	46,372	115,531	-30,989	-100,148
Average 1971-75	15,022	37,745	95,459	-22,723	- 80,437

Source: Derived from Appendix Tables 59, 63 and 71.

Prices Paid per Ton by Farmers for Fertilizers, by Areas, 1969-1974

<u>Year</u>	<u>Ont.</u>	<u>Ohio</u>	<u>Mich.</u>	<u>N.Y.</u>	<u>Fla.</u>	<u>Texas</u>	<u>Calif.</u>	<u>Wash.</u>
<u>Ammonium Nitrate</u>								
1969	62	60.5	61.5	69	61.5	63.5	79	84
1970	64	61	60	70	59.5	64	76.5	79
1971	67	65.5	63.5	71.5	61.5	67.5	79.5	77
1972	70	67	64.5	76	62	67.5	79	78
1973	78	73.5	77.5	86.5	76	76	88.5	93
1974	140.0	157.5	172.5	130.0	165.0	165.0	167.5	177.5

Muriate of Potash

1969	50	47	45.5	65.5	52.5	52	110	59
1970	50	54	51	71	60	55	107.5	63
1971	60	61	58.5	71.5	59	59	105	66.5
1972	60	60.5	59	73.5	58	61	107.5	71
1973	64	64.5	61.5	85.5	62	69.5	120	77

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1969	95	87	89	..	..	91	110	115
1970	88	89	91	..	..	92.5	107.5	110
1971	89	94	96	..	..	91	105	91
1972	90	97.5	99	..	..	95.5	107.5	117.5
1973	98	110	110	..	..	110	120	132.5

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1969	..	69.5	68.5	..	..	79	..	..
1970	63	75	70.5	..	..	82	..	..
1971	76	80.5	77	..	..	83	..	..
1972	80	83	81.5	..	..	82	..	..
1973	83	90.5	89.5	..	..	89.5	..	..

Source: Ontario - Horticultural enterprise cost studies for years 1969-1974, showing average prices paid by farmers for certain fertilizers.  
United States - Annual Summaries, Agricultural Prices, Statistical Reporting Service, Crop Reporting Board, U.S.D.A.

Vegetables and Small Fruits: Comparison of Average Yields per Acre, Canada and the United States, 1971-1974

	Ontario		Quebec	British Columbia	Canada	California		Oregon	Washington	New York	Michigan	United States
						-		pounds per acre -				
<u>Vegetables</u>												
Potatoes	18,542	13,300	22,667	18,510	32,694	34,187	41,410	22,758	22,473	23,533		
Peas	2,756	1,643	4,184	2,561	3,522	2,270	3,314	3,084 (a)	2,557 (a)	2,624		
Sweet Corn	8,064	5,415	9,834	7,384	7,282	13,745	11,220 (b)	7,062	6,558	8,909		
Tomatoes	33,878	6,286	22,703	28,817	43,908	..	17,252 (d)	19,118	18,804	33,147		
Snap Beans	4,201	3,641	5,995	3,981	5,967	8,174	6,147	3,994	4,639	4,668		
Carrots	40,996	14,561	22,374	22,646	32,310	44,258	44,043	35,334	23,415	26,821		
Celery	61,907	25,203	32,250	42,288	56,839	-	41,702	34,398	40,394	49,040		
Lettuce	15,881	8,511	25,822	12,961	24,182	17,845 (c)	16,661	19,570	18,650	22,539		
Onions (dry)	27,824	18,943	26,242	23,474	31,802	48,859	39,150	25,697	30,663	29,660		
Asparagus	1,795	2,067	1,454	1,748	3,076	2,250	2,913	- (d)	1,503	2,349 (d)		
Beets	27,007	10,598	12,800	17,135	..	.. (e)	..	32,571	..	26,002		
Cabbage	29,507	13,105	14,674	19,246	22,030	32,786	22,409	35,268	17,100	22,198		
Cauliflower	14,937	6,328	7,349	10,216	9,862	12,441	.. (d)	10,539 (b)	5,272	9,760		
Cucumbers	16,474	9,712	12,374	13,769	24,409	..	19,111	10,103	7,658	9,212		
Spinach	7,695	3,258	6,000	6,735	18,862	-	-	-	-	10,884		
<u>Small Fruits</u> (f)												
Strawberries	3,253	1,810	3,688	2,674	38,985	6,593	6,311	3,500	5,025	11,508		
Raspberries and loganberries	1,126	877	5,718	3,364	-	2,989	4,683	-	-	3,594		
Grapes	5,829	..	7,850	6,025	..	..	..	..	..	..		

(a) Two year average, 1973 and 1974.

(b) For fresh market only.

(c) Three year average, 1972-1974.

(d) For processing only.

(e) Includes Idaho in 1972.

(f) Canadian acreage based on 1971 census.

Source: Statistics Canada and U.S. Department of Agriculture.

















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